AN HONORED CALLING

A History of the College of Agricultural Sciences and Natural Resources



By Horace C. Smith

Edited by Lisa Byerley Gary

Published by
Institute of Agriculture
University of Tennessee
Knoxville, TN 37901-1071
1999

E11-1106-002-00

ERRATUM

On page 76, inset on page 77, and in the index page 108, Selmon Bennett is incorrect and should read Stelmon Bennett.

DEDICATIONS

PROFESSOR HORACE SMITH

Horace Smith was one of the most outstanding and versatile teachers in the history of the UT College of Agricultural Sciences and Natural Resources. He taught courses in soils, crops, and soil-crop relationships at both UT Knoxville and UT Martin.

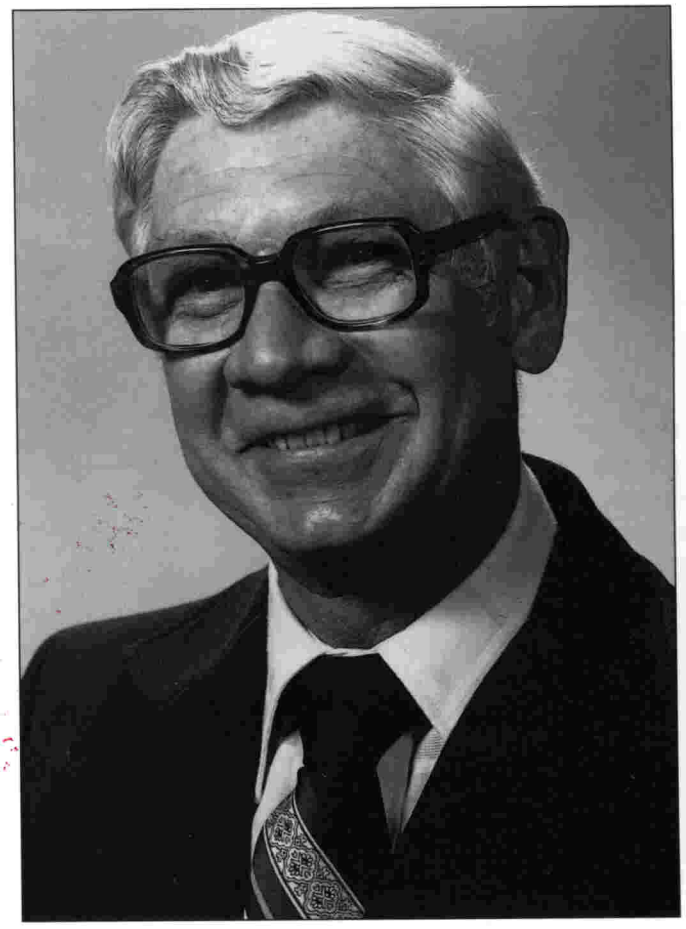
Horace was constantly developing and using new and innovative methods of teaching. One example was his development and use of audio-tutorial instruction in the basic course in plant and soil science. He also taught graduate courses for agricultural extension agents and high school agriculture teachers, short courses to local farmers, and coached the UT Soil Judging Team to several national contests. His love of photography led him to offer short courses in photography to colleagues and graduate students.

Horace was recognized for his outstanding teaching by being the first recipient of both the Gamma Sigma Delta Teaching Award of Merit and the Agriculture Student-Faculty Council Outstanding Teacher Award. His impact on the academic and professional lives of his students was shown by his high ranking in the 1990 UT Agricultural Alumni survey.

After retiring from UT he continued to teach, producing a variety of audiovisual programs for 4-H centers in Tennessee and teaching photography to senior citizens. He also prepared and presented slide programs to receptive audiences at local gatherings.

Horace dedicated many months of effort to this history, collecting much of the information and writing most of the text. Serious illness prevented him from completing the project, and he died on December 28, 1994. This history is a memorial not only to his efforts, but also to his devotion to teaching and learning.

— Dr. John Reynolds, professor, Plant and Soil Science



This history is a memorial not only to his efforts, but also to his devotion to teaching and learning.

This history is dedicated to the thousands of students, teaching faculty, and supporting staff who, over the years, have made the UT College of Agricultural Sciences and Natural Resources what it is today. And especially to:

DR. NEAL PEACOCK

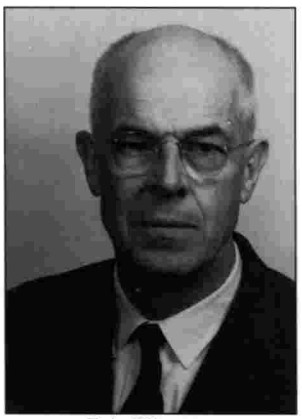
Gentleman, teacher, and administrator who gave many young teachers the opportunity to learn principles of good teaching through seminars and the chance to try new ways of teaching.



N.D. Peacock

DR. ERIC WINTERS

Scholar, teacher and administrator who inspired so many to learn more about the land, to apply scientific principles to improve agriculture and conserve our natural resources, and to teach others about it.



Eric Winters

(Editor's Note: Before his death, Horace Smith had planned to dedicate this history to mentors from his early days in the college.)

EDITOR'S NOTE

A WORK OF LOVE...

Any history is a major undertaking. When Horace Smith took this one on, it was an act of love. He was retired, but volunteered to amass the information and write a book out of love for his alma mater and from dedication to the teachers and mentors that meant so much to him as both a student and a professor.

He worked diligently over a period of several years and relinquished it as he was in declining health. His only compensation was the knowledge that the book would give recognition to the students, faculty, and administrators who made the college what it is.

Portions of the history were finished at different times. Some departments provided more information than others. Wonderful records existed concerning some subject areas; others were hardly mentioned in any printed piece. The finished product represents the best information available to everyone who worked on the history, though it may not be perfectly representative of every person, event, or entity that made a contribution to the college.

Professional historians tell us it is best to end a history a few years short of the time that it is published. It is impossible, otherwise, to gain proper perspective. This history ends, generally, in the early 1990s. Although specific accomplishments since then aren't included in this book, the reader should note that the college is doing well as it looks toward the new millenium. Enrollment averages about 1,400. Endowments and student quality scores are increasing. New building programs are underway as well.

The editor wishes to express her gratitude to many people without whom completion of this book would have been impossible:

Staff and faculty, past and present, who reviewed it include: Frank Bell, John Reynolds, John B. Sharp, and Homer Swingle. Their suggestions and insight strengthened the manuscript considerably. Sharon Littlepage, director of public relations for the Institute of Agriculture, contributed her editorial expertise to make the book consistent in all aspects of style and usage. Managing such a project in concert with usual institute business was quite a challenge. It is a tribute to Institute administration that the book was published.

Other faculty and staff members were patient, helpful, and indispensable in helping to complete missing sections during the editorial process. They include: Karen Johnson of agricultural development; John Todd in agricultural education; Glenda Collins, Linda Fournier, John Riley and Gary Schneider of the college dean's office; Lois Fehling of the institute business office; and Sandy Kitts and Jennifer Hall of the UT Photography Center.

The cover design is the work of Hugh Bailey, artist extraordinaire with university relations, whose work has graced many ag publications over the years.

A behind-the-scenes person who contributed to the history is the editor's father, Paul Byerley, who entered the UT College of Agriculture in 1950 as a first-generation college student. His love for the college inspired her own.

Though it isn't possible to mention everyone who brought this book to completion, all were a vital part. Every student, faculty member, administrator and supporting staff person who has worked for the good of the college contributed to this history. It belongs to them.

— Lisa Byerley Gary, editor

TABLE OF CONTENTS

AN HONORED CALLING —

A History of the College of Agricultural Sciences and Natural Resources, the University of Tennessee

PROFESSOR HORACE SMITH
DEDICATION i

A WORK OF LOVE
EDITOR'S NOTE iii

LOOKING FORWARD - LOOKING BACK
PREFACE ix

THE UNIVERSITY BEFORE THE MORRILL ACT — 1794-1869
INTRODUCTION 1

HISTORY OF THE COLLEGE OF AGRICULTURE
CHAPTER I 3
The Morrill Act of 1862 3
Tennessee Accepts Morrill Act 4
Land Grant Location 4
Early Organization 4
Early Curriculum 4
Student Life 6
Expenses 6
Agriculture Under Dabney 6
Harcourt Morgan Arrives 8
Summer School of the South 9
The Short Course 9
Martin Junior College 10
Undergraduate Enrollment 1896 - 1953 10
Faculty and Enrollment 11
Undergraduate Enrollment 1963–1990 11
Women in the College 12
Graduate Enrollment 12
Advanced Degrees in Agriculture 12
Salaries 13
Course Offerings 13
Innovative Teaching Methods 13
Agricultural Courses Offered 1993-94 13
Audiotutorial Teaching 14
Dial-A-Tutor Program 14
Student Recruitment 14
Varsity Visit 15
African-American Students 15
Major Issues and Concerns 16
Toward the Future 17
References 17

PROFILES OF LEADERSHIP
CHAPTER II 19
Prof. Hunter Nicholson 19
Prof. John M. McBryde 19
Prof. John W. Glenn 20
Prof. Charles S. Plumb 20
Prof. Charles Vanderford 20
Prof. Andrew M. Soule 20
Dr. Harcourt A. Morgan 20

Prof. Charles A. Willson 21
Dr. Moses Jacob 21
Dr. Cloide Everett Brehm 21
Dr. John H. McLeod 22
Dr. Webster Pendergrass 22
Dr. Neal D. Peacock 22
Dr. O. Glen Hall 22
Dr. Willis W. Armistead 23
Dr. Gary Schneider 23
Dr. D.M. (Pete) Gossett 23
References 23

BUILDINGS, FARMS, LIBRARY & OTHER FACILITIES
CHAPTER III 25
References 32

GIFTS, LOANS, SCHOLARSHIPS & OTHER FINANCIAL AID
CHAPTER IV 33
Work-Study Programs 33
Early Financial Aid 34
Modern Scholarship Programs 34
Prime Scholarships 34
Special Scholarships 35
Scholarship Administration 35
Awards Program and Banquet 36
Other Endowments and Gifts 36
Teaching and Learning Funds 36
Chairs of Excellence 37
References 37

STUDENT HONORS & ACTIVITIES
CHAPTER V 39
Early Clubs 39
The Ag Club 39
U.T. Farmer & Tennessee Farmer 40
Barnwarmin' 41
Ag Club Banquet 41
Student-Faculty Council 42
Roundup 42
Dairy Club 42
Judging Teams 43
Block and Bridle Club 44
Agronomy Club 44
Plant and Soil Science Club 44
Fruits Judging Team 44
Agricultural Education Clubs 44
4-H Club 45
Forestry Club 45
Wildlife and Fisheries Society 45
Agricultural Engineers 45
Entomology Club 46
Alpha Zeta 46
Gamma Sigma Delta 46
Highest Grade Point Averages 46
Alpha Gamma Rho 46
Ag Student Torchbearers 47
Outstanding Seniors 47
FarmHouse 47
Student Honors 47
References 48

QUALITY TEACHING & FACULTY HONORS
CHAPTER VI 49
Alumni Outstanding Teachers 50
Gamma Sigma Delta Teaching Award of Merit 51
College of Agriculture Outstanding Teachers 52
Twenty-Five Professors Most Often Mentioned by Alumni as Influential 52
References 52

AGRICULTURAL ENGINEERING
CHAPTER VII 53
Teaching Faculty 55
References 55

AGRICULTURAL ECONOMICS & RURAL SOCIOLOGY
CHAPTER VIII 57
Undergraduate Program 58
Graduate Programs 58
Facilities and Support Services 59
Agricultural Economics & Rural Sociology 59
Former Teaching Faculty 59
Teaching Faculty 59
References 60

THE ANIMAL SCIENCES
CHAPTER IX 61
Developing a Discipline 61
Dairying 62

Dairying Department 63
Teaching Faculty 63
Dairying and Poultry Graduates 64
Poultry Department 64
Animal Husbandry/Animal Science Graduates 65
Judging Team Coaches 65
Animal Husbandry and Animal Science 65
Animal Husbandry Graduates 65
Animal Science Faculty 66
Veterinary Science 66
Animal Science Former Teaching Faculty 67
References 68

AGRICULTURAL EDUCATION & EXTENSION EDUCATION
CHAPTER X 69
Agricultural Education 69
Ag Extension Education 72
Teaching Faculty 72
Departments Merge 73
References 73

ENTOMOLOGY & PLANT PATHOLOGY
CHAPTER XI 75
To The Agriculture Campus 75
Master's Degree Offered 76
Selmon Bennett Seminars 76
Name Change 77
Student Accomplishments 77
Teaching Faculty 77
References 77

FOOD SCIENCE & TECHNOLOGY
CHAPTER XII 79
Food Technology 79
Food Technology and Science 79
Teaching Faculty of Food Technology and Science 80
Food Technology & Science Degrees 80
Enrollment 81
References 81

FORESTRY, WILDLIFE & FISHERIES
CHAPTER XIII 83
Forestry Department 84
Forestry, Wildlife and Fisheries 84
Teaching Faculty 84
References 85

HORTICULTURE
CHAPTER XIV 87
Horticulture and Forestry 89
Teaching Faculty 89
References 89

ORNAMENTAL HORTICULTURE & LANDSCAPE DESIGN
CHAPTER XV 91
Early Ornamental Horticulture 91
Department Established 91
Teaching Faculty 93
References 94

AGRONOMY – PLANT & SOIL SCIENCE
CHAPTER XVI 95
Agronomy 95
Agronomy after World War II 97
Plant And Soil Science 98
Graduates in Agronomy/ Plant and Soil Science 98
Plant and Soil Science 99
Teaching Faculty 99
Former Teachers of Agronomy and Plant and Soil Science 99
Environmental Science 100
References 100

INDEX 101

PREFACE

LOOKING FORWARD — LOOKING BACK

Agriculture has been taught at the University of Tennessee since about 1871. During that time, programs have been administered as a Department of Agriculture, a School of Agriculture, a College of Agriculture, a College of Agriculture and Home Economics, and finally as the College of Agricultural Sciences and Natural Resources.

For many years the College of Agriculture included three units: the Agricultural Experiment Station, the Agricultural Extension Service, and Resident Instruction. Each of these divisions was supervised by a director or vice director, or by a vice dean under the direction of a dean. When the Institute of Agriculture was formed in 1968, the College of Agriculture finally became the name for the resident instruction programs. In 1991, the name was changed to the College of Agricultural Sciences and Natural Resources to reflect new curricula and goals.

The objectives and accomplishments of the Agricultural Experiment Station and the Agricultural Extension Service have been regularly recorded, especially through bulletins and similar publications and annual reports, and made a part of their history. The history of teaching has received much less attention. The earliest history this writer found was a short, unpublished paper titled "A History of the Agricultural Department, University of Tennessee" written by T.G. Hinton, who apparently was a student in dairying. Articles and news reports about the teaching programs, student activities, and faculty appeared in almost every issue of *The Tennessee Farmer*, an agricultural student publication, from the time of its first issue in 1906. The October 1936 edition of *The Tennessee Farmer* contained an article titled "The History of the Agricultural College." This history was rather brief, but was the best found by this author. Its author is unknown. Several of the issues that followed included short histories of many of the departments in the college.

"The wisest course for any organization is to look ahead while, at the same time, to never stop looking back."

Although emphasis was given to the Experiment Station and Extension Service, a history written in 1947 by A.J. Sims, Extension editor and chief of the Department of Information of the College of Agriculture, included some valuable information about the teaching program. *The University Record* (register and catalogs), especially of the early years, were valuable sources of information about enrollment and curricula. *The Tennessee Alumnus* was an excellent source of information about the agricultural faculty. The excellent histories of the University of Tennessee written by James R. Montgomery, Stanley J. Folmsbee, and Lee S. Greene include many references to policy makers, especially in the early developmental years of the agricultural programs.

Many people were helpful to the author during the preparation and editing of this book. Among these were personnel in the offices of the University Historian, Photography Center, university libraries, and Agricultural Development. Special appreciation is due to the dean of the College of Agricultural Sciences and Natural Resources, Dr. O. Glen Hall,

and to his assistant, Mrs. Billie Baker, for supplying information about the enrollment and changes in agricultural programs of the college in the past 25 years.

Appreciation is expressed to Dr. John McDow for the use of a portion of his excellent paper on the history of the scholarship program of the college.

Early drafts of the histories of the departments were written by faculty in those departments. Their words and ideas have been used as much as possible. However, for better organization, the author has taken the liberty to make certain editorial changes. The author is indebted to Dr. Frank Masincupp for writing the history of the animal sciences, to Dr. Kelly Robbins for furnishing information on livestock judging teams, and to Dr. John Day for the history of the Department of Ornamental Horticulture and Landscape Design. The writers of the other departmental histories are not known; however, the author is indebted to each of them for their contributions.

The writing of this history has not been an easy task for someone who is not a historian, accomplished writer, or typist. However, the task was made easier by the writer's interest in many of the people, both students and faculty, who have made the institution what it is today. Fifty years of association with the College of Agriculture has given me the opportunity to know many of the people who molded this college — a personal interest in those people and their accomplishments kept the project going.

The wisest course for any organization is to look ahead while, at the same time, to never stop looking back. I hope looking back on the people, the goals, and the aspirations that have made the college what it is will, in some way, add to the future of the College of Agricultural Sciences and Natural Resources.

Some one has said that writing a book is like cleaning an elephant: there's no good place to begin or end, and it's hard to keep track of what you've already covered. That fits the writing of this history!

Mark Twain, upon finishing *Huckleberry Finn*, is credited with this remark: "There ain't nothing more to write about, and I am rotten glad of it, because if I'd known what a trouble it was to make a book I wouldn't a tackled it, and ain't going to no more."

I agree!

— Horace C. Smith

INTRODUCTION

THE UNIVERSITY BEFORE THE MORRILL ACT — 1794-1869

Although agriculture was not taught at the University of Tennessee before 1869, it seems appropriate to briefly review the early history of the institution and the nature of the teaching programs before that time.

The place was Knoxville, the capital of the territory of the United States of America South of the River Ohio. It was a little settlement on the very edge of the territory that had been granted to the states by North Carolina four years before. Only two years before, the little town had been laid out by Colonel James White. The area around the town was a vast wilderness where small groups of unfriendly Native Americans still roamed.

The occasion was the fifteenth day of the first session of the general assembly of the territory. It was here that Blount College was born by an act of the House of Representatives of that legislature on September 10, 1794. The purpose of the college was "to promote the happiness of the people at large, and especially of the rising generation, by instituting seminaries of education, where youth may be habituated to an amiable, moral and virtuous conduct, and accurately instructed in the various branches of useful science, and in the principles of the ancient and modern languages."(1)

William Cocke, a native of Virginia, former resident of North Carolina, soldier at King's Mountain, future United States senator and the representative from Hawkins County, presented "a Bill for the establishment of _____ College in the vicinity of Knoxville," the blank being later filled with the name of the governor of the territory, William Blount. Rev. Samuel Carrick, a scholarly Presbyterian preacher of Scott-Irish blood and a native son of Pennsylvania, was appointed president and the first and only teacher of the new school.

Blount College was one of the first colleges chartered in the region west of the Blue Ridge mountains, the 28th to be chartered in the new nation, and the first nondenominational college to be established under the jurisdiction of the United States. A few years later Blount College became the first institution of higher learning to enroll young women. These ladies were Barbara Blount, Polly McClung, Jennie Armstrong, Mattie Kain, and Kittie Kain. Several dormitories have been named for first women enrolled in the institution.

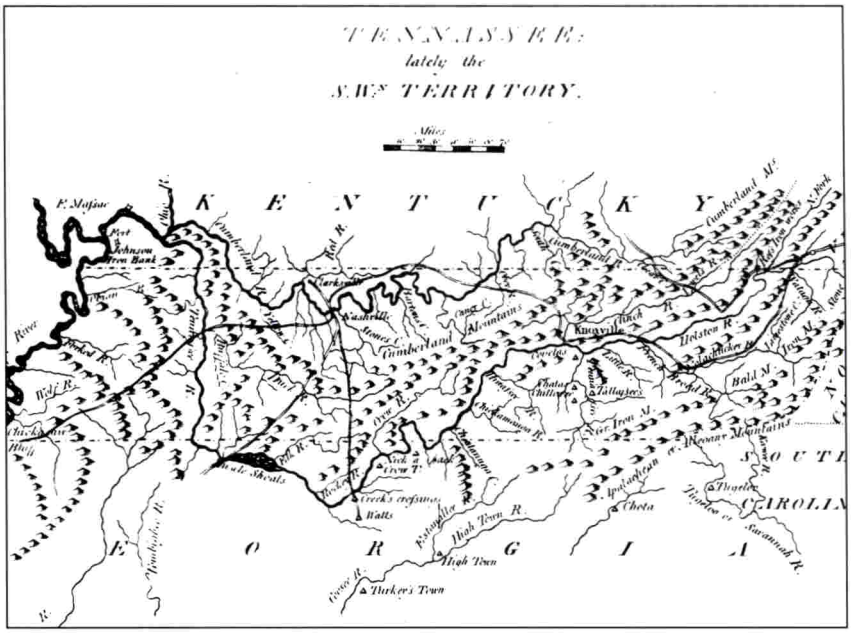
"Blount College was one of the first colleges chartered in the region west of the Blue Ridge mountains, the 28th to be chartered in the new nation, and the first nondenominational college to be established under the jurisdiction of the United States."

Seventeen men were designated in the charter as trustees of the new school. One was Blount, governor of the territory, a member of the Continental Congress from North Carolina, a charter trustee of the University of North Carolina, and a member of the Federal Constitutional Convention. Among the other trustees were General John Sevier, a native Virginian, famous Indian fighter, and later the first governor of Tennessee; Colonel James White, founder of the city of Knoxville; William Cocke, as previously mentioned; Willie Blount, brother of the governor and later a governor himself and a leader in educational affairs in the state; and

Charles McClung, a prominent pioneer and designer of the Great Seal of Tennessee. The institution opened soon thereafter in a two-story wooden building on the eastern side of Gay Street near the intersection with Clinch Avenue. Other reports have placed the school at the northwest corner of the square where the First Baptist Church now stands.(2)

In 1806 Blount College was endowed with a federal grant of 50,000 acres of public land. The state legislature established the East Tennessee College in 1807 and approved the absorption of Blount College. "The Hill" was purchased in 1826 and became the main campus. In 1840 the legislature changed the name to East Tennessee University.(3)

From the beginning, the school was financially poor; the state did not provide funding until much later. In fact the college was closed from 1809, when Rev. Carrick died, until 1820 mainly due to a lack of funds. It remained a struggle for the school to stay open until after the Civil War.



Knoxville was a trade center for Tennessee in this early, pre-statehood map.

The university was closed during the Civil War and the buildings were used as barracks and hospitals by the Confederates early in the war and then by the Federal army. The school reopened in 1866.(4)

During its first 70 years, the institution served mainly the sons and a few daughters of wealthy families. Although tuition in 1804 at Blount College was only $8 for a session of five months, and room and board only $25 per session, even these small fees prevented many frontiersmen's sons from attending. From its beginning and until after the Civil War, the institution did not provide a general education for the masses, but offered classical training to the sons of the wealthy. Courses included Virgil, rhetoric, Horace, logic, geography, Greek, mathematics, ethics and natural philosophy.

By the mid-19th century, agricultural groups in many states were demanding colleges where agriculture could be studied. Education at that time had little relation to the occupations and objectives of the great mass of people or to the products of the earth — agriculture, mining, and other related resources. Between 1854 and 1860, five agricultural departments were established in colleges in the United States. The first chair in agriculture was established at Columbia College in New York in 1792.(5)

An unsuccessful attempt was made at East Tennessee University to add agriculture and other practical courses under the presidency of Rev. George Cook in the 1850s. Until 1869, the institution remained a small academy teaching the classics, funded by contributions and student fees, without state funding, and serving only a few.

As agriculture classes were begun in land-grant institutions, teachers of the natural sciences were called upon to modify their courses to include agriculture or to develop new courses.

Teachers with backgrounds in chemistry and botany were among the first to teach agriculture. In many cases students were taught as if they were going to be analysts rather than agricultural experts. Later, all agricultural subject matter was taught as general agriculture by one or very few faculty. Horticulture was the first subject to be taught separately from general agriculture at many institutions. The next division was usually animal husbandry. Later dairying became a separate course, and then agronomy. Rural engineering and rural economics, if taught, were usually offered as a part of general agriculture or agronomy. Other disciplines developed as more knowledge about the complexities of agriculture became known.

REFERENCES

1. Edward T. Sanford, *Blount College and the University of Tennessee.* An historical address delivered before the Alumni Association and members of the university. Knoxville, TN: The University of Tennessee, June 12, 1894.
2. *The University of Tennessee Sesqui-Centennial.* Knoxville, TN: The University of Tennessee Press, 1945.
3. See No. 2.
4. See No. 2.
5. Alfred C. True, *A History of Agricultural Education in the United States, 1785-1925.* Washington, DC: United States Department of Agriculture Misc. Pub. No. 36, 1929.

CHAPTER 1

HISTORY OF THE COLLEGE OF AGRICULTURE

The teaching of agriculture at the University of Tennessee in Knoxville, then East Tennessee University, came about as a result of action by the United States Congress in 1862.

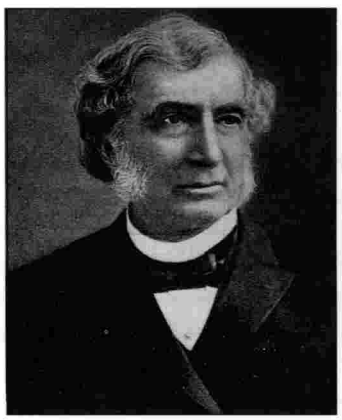
Congress had debated the issue of more practical education during the 1850s and finally passed the Morrill Act of 1857. This act was vetoed by President Buchanan in 1859 on the grounds that, historically, educational matters had been left to the states.

THE MORRILL ACT OF 1862

In 1862 the Morrill or Land-Grant Act was passed by U.S. Congress and signed by President Lincoln. This act provided for "the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes."(1)

Justin S. Morrill, a native of Vermont and member of the House of Representatives for 12 years and of the Senate for 32 years, was the writer of the bill that created the land-grant college system. The people should be eternally grateful for this unique educational system. Senator Morrill was born in 1810 and died in 1898 after many years as an important and influential statesman.

The Morrill Act provided a grant of 30,000 acres of land to each state for every one of its senators and representatives in the U.S. Congress. The land was to be sold and the money used to invest in interest-bearing bonds. The income was to be used to establish colleges of agriculture and mechanical arts in the various states.



Justin S. Morrill

Several states took advantage of the act immediately after its passage. Iowa was the first state to receive the grant, followed by Vermont and then Connecticut. Maryland, Michigan, Pennsylvania and the Yale Scientific School were teaching agriculture at the time the act was passed. In the next 10 years agricultural instruction was given in at least 10 agricultural and mechanical colleges and 15 universities.(2)

Since the country was at war when the Morrill Act was passed, it was impossible for Tennessee and other southern states to accept the land-grant offer. In 1867 congress passed a special law to allow Tennessee to be eligible for the land-grant funds. Two well-known and influential members of the U.S. House of Representatives, Horace Maynard and William Stokes, took the lead in sponsoring the measure and replying to the arguments of its opponents. One amendment that failed to pass provided that no one who had ever held a military or civil office under the Confederate government or the rebel state government of Tennessee could be a teacher in

the agricultural colleges of Tennessee. The Morrill act became law on February 8, 1867, after the Tennessee legislature enfranchised African-Americans.

TENNESSEE ACCEPTS MORRILL ACT

In 1867, the state legislature accepted the land-grant. East Tennessee University received 300,000 acres in the land-grant. The scrip sold for about 91 cents per acre. However, the school received $396,000 in state bonds bearing six percent interest. The first money from this fund was released in 1871. The Morrill Act allowed 10 percent of the money to be used to purchase sites or experimental farms. The remainder was to be used in the operation of the school.

LAND GRANT LOCATION

There was considerable discussion as to the location of the new agricultural college in Tennessee. The leading contender for the endowment was Union University at Murfreesboro — a Baptist school. This institution offered 120 acres of land, several buildings, and also had the support of the state superintendent of public instruction.

This offer prompted friends of East Tennessee University to meet on November 26, 1867, to discuss the location of the new college. The group first recommended that the funds be divided equally among the three divisions of the state. However, a few days later the group drafted a report urging the legislature to award the federal endowment to East Tennessee University, because it was a state institution, was not sectarian in character, and would be near the major mining and manufacturing areas of the state.

Friends of East Tennessee University made a vigorous effort to obtain the land-grant because of the school's critical financial situation. The board of trustees authorized President Thomas W. Humes to employ or appoint one or more persons to attend a session of the legislature to encourage the passage of a law establishing the agricultural college as a department of East Tennessee University. Humes appointed Edward J. Sanford, a trustee and influential friend of the university, as his representative. Much of the credit for obtaining land-grant funds for the university was given to him.

In 1869 the university trustees purchased the university farm of 262 acres on Kingston Pike for $30,000, thus fulfilling the requirements of the Morrill Act that at least 200 acres be owned by the agricultural college. This land was used not only by the university for research for many years but has also been a field laboratory for the teaching program.

EARLY ORGANIZATION

During some administrations, the agricultural teaching branch was a school; during others it was a college. For many years the College of Agriculture included the Experiment Station and the Extension Service as well as resident instruction. During two periods it was the College of Agriculture and Home Economics. To better describe the objectives and mission of the college, it was renamed the College of Agricultural Sciences and Natural Resources in 1991.

The first organization of the new school in 1869 had three courses of study: agriculture, scientific, and classical. Prof. Hunter Nicholson was named the first professor of agriculture on December 4, 1869. Nicholson was the son of a prominent Middle Tennessee Democratic leader, editor, lawyer, judge, and United States senator. He spent the first months on the job, at the request of the board of trustees, with the legislature promoting the interest of the university and then canvassing Middle and West Tennessee for prospective students.

Nicholson insisted that the course of study in the new department would not be all agriculture, but would retain some of the classics in the curriculum. From the very beginning, agricultural students received a broad education to make them better citizens as well as better agriculturalists.

As Nicholson put it: "It is of the right primary and dominant purpose of every college, be it classical or scientific, to develop the mental and moral faculties of its students. Culture is its end and aim. No college can wisely take for its highest, or recognize as its ultimate aim, the preparation of its students for being mere breadwinners; to qualify them for making a living."

Although many students and even some faculty have questioned this approach, the same philosophy continues today in the College of Agricultural Sciences and Natural Resources.

Nicholson was also opposed to the extensive use of student labor on the farm as advocated by many on the board of trustees. He contended that leisure hours were best spent on studies. He found it ridiculous to assume that students could be fed and clothed on the proceeds of their manual work. He also found it beyond his power "to teach with anything like success, the ordinary work of the farm to boys wholly ignorant of the elements of the physical sciences."

EARLY CURRICULUM

The agricultural curriculum, in the beginning, reflected the thinking of educators of that time and was similar to the curricula in other land-grant colleges. The first course of study was as follows:

FRESHMAN YEAR: geometry, algebra, human anatomy and physiology, chemical physics, chemistry, botany, French, exercises in orthography (spelling), English composition, and elocution.

SOPHOMORE YEAR: bookkeeping and commercial arithmetic, trigonometry, mensuration, agriculture, surveying, analytical chemistry, zoology, drawing, German, English composition, and elocution.

JUNIOR YEAR: natural philosophy, astronomy, agricultural chemistry, drawing, history of the United States, French or German, rhetoric and logic, horticulture, and systemic botany.

SENIOR YEAR: metaphysics, ethics, physical and political geography, geology, mineralogy, engineering, civil policy, and political economy.

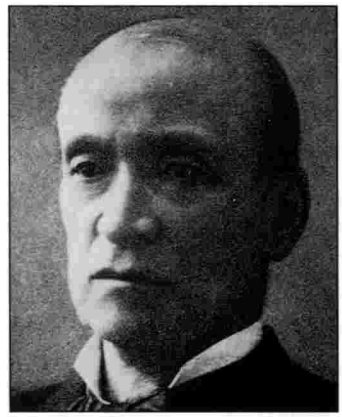
Although the agricultural curriculum was somewhat less rigorous than the classical one, many students were poorly prepared to proceed with the regular program. Many were required to enter the Preparatory Department because of a lack of adequate secondary education in Tennessee at that time. The preparatory course was three years in duration; however, students were assigned to classes based on their previous knowledge and education. The program included English grammar, geography, arithmetic, reading, writing, spelling, elementary algebra, English, American history, and natural philosophy.

The agricultural faculty had at least one other member in addition to Nicholson. Prof. W.O. Atwater was professor of agricultural chemistry. He had studied agricultural chemistry under Prof. S.M. Johnson in the Scientific School at Yale College, and had spent two years studying in Europe. Atwater brought with him a collection of improved equipment for the laboratory. For many years agricultural chemistry was an important part of the department, not only as a course of study but also in the research of the Experiment Station. Atwater was replaced by Prof. B.S. Burton.

Atwater later established the first state agricultural experiment station in the U.S. in 1875 at Wesleyan University in Connecticut. This became the experiment station of the University of Connecticut under S.M. Johnson. Later Atwater was placed in charge of nutrition investigations in the Office of Experiment Stations of the United States Department of Agriculture. He had a great influence on the early development of nutrition in schools of home economics, as well as agricultural chemistry and plant nutrition education.

In 1877, the three existing courses of study at the university were made into colleges: College of Agriculture, College of Engineering and Mechanical Arts, and the Classical College. The institution was gradually changing from the old classical education to one emphasizing the sciences.

Judge Oliver P. Temple, a trustee from Knoxville, fought hard in those early days to get more agriculture, mechanical arts, and science taught in order to better satisfy the requirements of the Morrill Act. He promoted the idea that the "leading object" of the institution should be the teaching of agriculture and mechanical arts. Temple had much opposition from President Thomas W. Humes and many of the "old classic college" faculty.



Oliver P. Temple

Although the number of students enrolled as candidates for a degree in the agricultural program apparently was fewer than five each year, the following statement appeared in the 1878-79 catalog:

"The work of the Chair of Agriculture has been increasing beyond the capacity of any one professor, but it has not been found practicable to increase the teaching force in the college. By the recent action of the board of trustees, however, this chair has been divided and an additional professor is to be chosen. The new chair will be specially devoted to the practice of agriculture, and be known as the chair of practical agriculture, while the other is to be known as the chair of natural history of agriculture."

Apparently, Nicholson moved to the chair of natural history, and the chair of practical agriculture was filled by John M. McBryde. McBryde held the title of professor of agriculture, horticulture and botany.

In 1879 East Tennessee University became the University of Tennessee. Prof. McBryde stayed at UT until 1882. Then he returned to his native state as president of South Carolina College, which at that time included the department of agriculture before it was transferred to Clemson College. Dr. Charles Dabney, a later president of the university, called McBryde the "real father of scientific agriculture in the South" and admitted that "we all learned from him how to teach agriculture and he first showed the people how they should support agricultural colleges."

McBryde was not only a fine teacher, but was also largely responsible for the establishment of the Tennessee Experiment Station, one of the first five in the nation. However, he never held the title of director of the station. The board of trustees made a vigorous effort to keep him at the university. They adopted a resolution of appreciation for his services and offered him $2,400 a year to stay. However, he returned to South Carolina in 1882. Twice, McBryde agreed to be president of UT — in 1886 and after the passage of the Hatch Act which allotted money for the Experiment Station. But he later turned down the position because of his health. He became president of what is now Virginia Polytechnic

Institute and State University in 1891, remaining there for some 16 years.

STUDENT LIFE

The method adopted for lecturing in the department is given in the 1878 -79 catalog.(4) Lecture topics were placed on the blackboard before students entered the room. These "head-notes" were copied by the class; the professor then discussed the topics and illustrated them on the board. At the next class meeting, each student was required to hand in a written report on the lecture of the preceding meeting. These reports were reviewed and corrected by the professor during the interval between meetings.

In spite of the earlier feelings of Prof. Nicholson, students in 1880 were required to work one day and go to school the next. Many UT students were sons of farmers during this period; however, most were not enrolled in agriculture. All candidates for any degree, by order of the board of trustees, were required to attend a course of lectures on subjects relating to agriculture and the mechanic arts.

The 1879 -80 *University Record* lists these lectures: geology on the farm, four lectures; mechanics of the farm, four lectures; agriculture (probably field crops and animals), four lectures; horticulture, two lectures; botany, two lectures; and agricultural chemistry, four lectures.

The course of study for the bachelor of agriculture degree in 1880 included 520 hours in class in mathematics and physics; 440 hours in chemistry and agricultural chemistry; 200 hours in mineralogy and geology; 80 hours in physical geography; 120 hours in physiology; 400 hours in French and/or German and English; 80 hours on domestic animals; 80 hours in horticulture; and 200 hours in scientific and practical agriculture, for a total of 2,400 hours for the two terms of about 10 months per year. The hours of agriculture in the curriculum amounted to only 15 percent of the total.

The School of Agriculture at this time was divided into three courses: agriculture, horticulture, and botany. Agriculture was further divided into theoretical (or experimental) and the practical (or applied). The theoretical consisted of five courses: the nutrition of plants and animals, the relation of plants to the atmosphere and soil, the physical and chemical properties of soils, the theory and action of manures — organic and inorganic, and the principles of construction and use of farm machinery.

The practical course was composed of the classification and properties of soils; manures: mineral, vegetable and animal; tillage; grasses, legumes, cereals, and root crops; improvement of soils; farm buildings; domestic animals; orchards; implements; and rural economy. It is not clear if the practical agricultural curriculum included only the field and laboratory phases of the agricultural program.

EXPENSES...

In 1879-80, expenses for a five month term were about $75, which included:

- *tuition $15*
- *incidental fees $6*
- *room rent $3*
- *gas for room $2.50*
- *library $1*
- *furniture $8-10*
- *plus laboratory costs and cadet uniforms*

The school also offered a certificate after 1,200 hours of courses. This program seems to be the first of the two-year programs which were offered for many years by the college.

The horticulture course had eight subjects. These are discussed in the section on the history of horticulture in the chapter on the Department of Plant and Soil Science. The botany course included elementary principles of science; structural, physiological, and systemic botany; and the analysis, collection, and preservation of plants.

There were 36 students in all the agricultural courses in the program. Prof. McBryde was apparently the only teacher of all the courses listed above.(5)

The School of Agriculture was established in 1882 as a separate unit of the university. Prof. John W. Glenn replaced Prof. McBryde that year as head of the school and professor of agriculture, horticulture, and botany. Although McBryde laid the foundation, Glenn is considered to be the first director of the Experiment Station. However, like others before him, Glenn taught most of the agricultural courses.

AGRICULTURE UNDER DABNEY

Dr. Charles Dabney, a chemist and director of the North Carolina Agricultural Experiment Station at Chapel Hill, became president of the University of Tennessee in 1887. After failing to get industrial courses into the program at Chapel Hill, he was instrumental in the development of a separate agricultural and mechanical college at Raleigh, which is now North Carolina State University. Partially because he had alienated certain politicians and supporters of the University of North Carolina, Dr. Dabney accepted the presidency of the University of Tennessee and the position of director of the Experiment Station rather than going to Raleigh.(6)

Dabney completely reorganized the academic program at UT. The Academic Department now included two divisions: the College of Agriculture, Mechanic Arts and Sciences and the University Postgraduate Department. The faculty was

organized into 10 schools, including three related to agriculture: the School of Agriculture, the School of Agricultural and Organic Chemistry, and the School of Botany and Horticulture. There were a total of four faculty in these three schools.(7)

Although he did not teach agriculture in the college, as president Dabney greatly influenced the teaching program and, during his tenure, taught the only course in agricultural chemistry. He also taught a course in economics, including rural economics. He advocated that five-sevenths of the instruction for all students be in agriculture and mechanical arts and only two-sevenths of the course program in other scientific and classical studies. During his administration all students were required to take one course in agriculture.



Dr. Charles W. Dabney, university president, tries out a new plow at the East Tennessee Farmer's Convention, held on the College Farm around 1904. Dabney reorganized the university to focus more on scientific and agricultural subjects.

In 1901 Dr. Dabney made this observation:

"Our great resources in Tennessee — climate, soils and minerals —are useless in the hands of an untrained people. Moreover, if we do not educate our own people to use these resources intelligently, the trained men of other states will come in and do so, and make our native people 'the hewers of wood and the drawers of water' in their industries. Some persons seem to think that the marvelous energy and common sense of our people are a sufficient guarantee of their success in the battle of life, but common sense and even unmeasured energy do not win these days without education. We must give our people knowledge and training or they will surely fail in the hot competition of the twentieth century."(8)

Dabney was assistant secretary of agriculture of the United States from 1894 to 1897 during which time he continued to serve as president. He became president of the University of Cincinnati in 1904 where he served for many years. He returned to UT in 1944 as an honored guest during the university's sesqui-centennial.(9)

Following his selection as UT president, Dabney visited institutions in the North to observe their operation and to obtain suggestions for UT's agricultural faculty. He interviewed Charles S. Plumb, who was assistant director of the New York Experiment Station at Geneva. Plumb joined the UT faculty in 1887 as chairman of the School of Agriculture and assistant director of the Experiment Station. He reorganized the course work to emphasize forage and field crops, soil conservation, animal husbandry, and dairying, and remained on the faculty for three years.(10)

During the period 1887 to 1897, the number of students ranged from 28 to 40, and the numbers did not change greatly until after 1910.

In 1890 there were only two departments in the university: the College of Agriculture, Mechanic Arts and Sciences and the Postgraduate Department. The four course programs offered in the first department were agriculture, literary - scientific, Latin - scientific and mechanics and engineering. These four programs were divided into 16 schools, three of which were agriculture, botany and horticulture, and zoology and entomology. The agricultural school included courses in: physiology; history of agriculture; cereals, grasses, weeds, fences, architecture, implements, road building; livestock; farm management, accounts and farm law; and experimental work. The latter, presumably, was work and experience on the Experiment Station farm.

The only full-time agricultural faculty in 1890 were Prof. Charles Vanderford in agriculture and Prof. Ralph L. Watts in horticulture. Vanderford was one of the few native Tennesseans on the early faculties of agriculture. He had been a very successful scientific farmer in Rutherford County. He served as chairman of agriculture and secretary (director) of the Experiment Station until his death in 1899.(11)

During this period only a small number of students registered in a full agricultural curriculum. A two-year program had some success; however, the four-year program appar-

ently did not. Only one student graduated in agriculture in 1891, and none in 1892.(12)

Between 1880 to 1892, the value of farm products in Tennessee increased from about $62 million to more than $120 million. This agricultural prosperity had a great influence on the state and the university, but little effect on the enrollment in the four-year agricultural program.

Prof. Andrew M. Soule came to the UT in 1899 as professor of agriculture and chairman of the department. His reports in the *University of Tennessee Record* of 1900-1904 would indicate that he was a well-educated man and a diligent promoter of the college. Although he taught many of the courses in agriculture, he had a small but very able faculty, all of whom would make important contributions to Tennessee and southern agriculture for many years to come.

Prof. Samuel M. Bain was the teacher of botany. He made outstanding contributions in his field, including plant disease control through plant breeding.

Prof. Charles A. Mooers, an alumnus of UT, taught agricultural chemistry. His contributions included research in soil fertility and fertilizers, and as director of the Experiment Station. Mooers taught agronomy for six years and agricultural chemistry for many more. He had a great influence on teaching, both in college courses and to farmer groups.

Prof. Charles A. Keffer was head and the teacher of horticulture at this time. Perhaps no one had more influence on Tennessee agriculture than did Prof. Keffer, especially as the first director of the Agricultural Extension Service. The contributions of these men will be discussed further in the departmental histories.

Prof. William M. Fulton was a teacher of meteorology and in charge of the U.S. Weather Station. The University of Tennessee was the first school in the South, and perhaps in the entire country, to offer a course in meteorology in the School of Agriculture.

Although F.M. Broome was not a teacher, except that he occasionally taught bookkeeping in the Short Course, he was a valued member of the faculty. He was the librarian, later served many years as secretary to deans and directors, and was the college photographer for many years.

Most of this small faculty had responsibilities in teaching, research, and Extension. In 1899 there were only 29 officers and faculty in the entire university. Through 1903, the agricultural teaching programs were organized either as a school or as a department. The name was changed to College of Agriculture in 1904.

In 1904, Soule informed university trustees that he had been offered a position at another institution. The trustees offered to raise his salary to $3,000 a year and free house rent. This was equivalent to $1,000 more than the other professors in the university. Soule apparently was disappointed at not obtaining the presidency of the university when Dr. Dabney resigned, and this no doubt contributed to his accepting the offer to become director of the Virginia Agricultural Experiment Station.(14)

HARCOURT MORGAN ARRIVES

Upon the recommendation of C.A. Mooers, Dr. Brown Ayres, the new UT president, recruited Dr. Harcourt A. Morgan of Louisiana State University as director of the Experiment Station and chairman of the School of Agriculture. Dr. Morgan accepted these positions in 1905. He was a native of Ontario, educated at Cornell, and had been at Louisiana State University as professor and entomologist with the Experiment Station. He taught zoology and entomology in the School of Agriculture from 1905 until 1913.

Morgan's contributions to UT's agricultural programs and as president of the university had a great impact on the institution. The School of Agriculture became a college again in 1913 and Dr. Morgan became dean of the college in 1914. He served as president of the university from 1919 until 1934, when he became a member of the TVA Board of Directors. Even before Morgan became president he worked diligently to obtain the first million-dollar appropriation for the university from the state. Morgan spent a lifetime preaching scientific agriculture and conservation. The first major building for classrooms on the "farm," constructed in 1921, was originally called Agricultural Hall and later renamed Morgan Hall in appreciation of his contributions.(15)

During the early years of Morgan's time as chairman and dean, the courses in agriculture included agronomy, horticulture, animal husbandry and dairy husbandry. One course for seniors in plant and animal improvement was team-taught by Prof. Charles Willson of animal husbandry and Prof. Keffer of horticulture.

Prof. Willson became vice dean of the college in 1919 when H.A. Morgan became UT president. For the school year 1920-21 there were about 150 students in the college — a fivefold increase over 1910-11. About 60 courses were offered in 1920-21, compared to only 40 in 1910-11.

Agricultural education and agricultural economics departments were added to the college. Around the same time, botany, zoology, and entomology became a part of the College of Liberal Arts rather than agriculture.

Several professors remained at the university for many years and made significant contributions to the programs. These included Prof. Willson; Prof. Keffer, who became the first director of the Extension service; Dr. Moses Jacob, who followed Prof. Willson as dean; Prof. Charles Mooers, who followed Dr. Morgan as director of the station; Prof. Samuel

Bain, who made a great contribution to disease control through plant breeding; and Prof. G.M. Bentley, who taught entomology and plant pathology. Bentley, who served as state entomologist and plant pathologist, transferred to the department of entomology in the College of Liberal Arts.

SUMMER SCHOOL OF THE SOUTH

Agriculture was made a required study in Tennessee public secondary schools in the early 1900s. To help teachers become proficient in this area, UT established a summer course. Around 130 teachers attended the summer session in agriculture of 1910. About 30 were from other states. These teachers had all the advantages of regular summer school students, without payment of fees, and could also use the reduced railroad rates offered to regular students. Special low-cost boarding arrangements were provided.

The University of Tennessee's Summer School of the South was a very important training program for teachers from many states in the region. The announcement for the Summer School of the South mentioned two courses taught by Morgan and Keffer. One course was nature study and biology, which included plant life, insect life and zoology. The other was agriculture, horticulture, and school gardens.

In 1905 an announcement was made that an agricultural course for women would be taught in January and February. The course included dairying, poultry breeding, horticulture, bee culture, and home economics.

THE SHORT COURSE

Short course programs for farmers started at the University of Minnesota in 1886. Many departments of agriculture in the country followed suit.(16)

The first short course in Tennessee was probably offered around the turn of the century. In the early years, the faculty apparently spent more time organizing and teaching courses to special groups, including the short course, than they did teaching in the four-year program. In 1911, 65 students took the winter short course, which included two weeks each in agronomy, animal husbandry, dairy husbandry, poultry husbandry, and bee husbandry.

In the years just prior to the formation of the Agricultural Extension Service, professors spent a large portion of their time teaching "extension" courses across the state. After

Short Course in Agriculture

—AT THE—

University of Tennessee

January 3rd to March 14th.

Practical courses of lectures with practice in DAIRYING, HORTICULTURE, GENERAL AGRICULTURE and ANIMAL HUSBANDRY, with instruction in BOTANY, agricultural CHEMISTRY, METEOROLOGY and VETERINARY MEDICINE, and exercises in CARPENTRY and BLACK-SMITHING.

EQUIPMENT.

The University farm is splendidly equipped, and its extensive experiments in stock feeding, dairying, field crops, and tillage are available for instruction.

$550.00 IN PRIZES.

In the form of SILVER CUPS, CASH, FARM IMPLEMENTS will be awarded to students for proficiency in the various lines of instruction.

CONDITIONS OF ADMISSION.

Tuition is free. No entrance examinations. Students must be at least sixteen years old, and are expected to have a rudimentary education. Total expenses for the full ten weeks, including room, board, books, dairy suits, stock judging trips, incidental expenses and University fees need not exceed $50.00.

COURSES ARE OPEN TO MEN AND WOMEN.

Intending students should notify us at the earliest possible date. For circular of information, address,

PROF. ANDREW M. SOULE,
University of Tennessee, Knoxville

Advertisement in the Tri-State Farmer & Gardener, *1900.*



The University Short Course in agriculture began around the turn of the century to educate those who couldn't spend four years to obtain a degree. This parade float advertises the 1901 course, which lasted about ten weeks.

the Extension Service became a reality in 1914, many of the teaching faculty were relieved of duties in teaching farmers and most began to spend more time on teaching the college students and conducting research.

Qualified farmers were often used to assist in teaching some of the short courses. In 1911, courses were taught in four towns with 677 persons enrolled. In 1912 the number of towns increased to nine. During the period 1903 to 1915, about 6,000 people attended short courses in agriculture sponsored by UT. Travel in those days was mainly by rail, and several railroad companies were generous in furnishing free transportation for teachers and equipment to the towns where short courses were to be held.

An Agricultural Short Course Club was even formed on campus in 1910. Among its objectives were to "increase the interest of the farmers in agricultural education and to secure students for the university Short Courses from every county in the state."(17)

MARTIN JUNIOR COLLEGE

The University of Tennessee Junior College of Agriculture, Home Economics, and Industrial Arts was established, by act of the legislature of 1927, at Martin, Tennessee. The junior college was organized as part of the University of Tennessee; its faculty were members of their respective departments in the university, and its students were considered to be a part of the regular enrollment of the university.

President Morgan and Dean Hoskins wanted a program of instruction there that would not compete with other state schools; therefore a two-year curriculum was offered in agriculture and home economics with elective courses in industrial arts as applied to agriculture.

Dean Willson and some of the faculty at Knoxville, including Prof. C.E. Wylie (dairying), Dr. N.D. Peacock (horticulture) and Prof. G.M. Bentley (entomology) supervised the teaching in their disciplines at Martin.

The first agricultural faculty members at Martin included Clarence "Pop" Cravens, who taught agronomy and horticulture under the direction of Dr. Peacock until the 1940s, and Richard G. Turner, who taught biology. L.O. Colebank joined the faculty in 1928 to teach dairying and animal husbandry under the direction of Prof. Wylie. Colebank remained there until 1933, then spent many years with the university at Knoxville in the Agricultural Extension Service.

The courses at Martin, by number and content, were similar to those at Knoxville for the first two years. Students completing the two-year curriculum at the junior college were generally able to obtain the B.S. degree with two additional years at Knoxville.

Faculty were hired by the junior college administration, often in consultation with faculty at Knoxville. Curriculum remained under the supervision of the Knoxville dean even after Martin became a four-year school, the University of Tennessee Martin Branch, in 1951. In 1967, the school became the University of Tennessee at Martin and was then a separate school in the UT system. The teaching program was no longer under the supervision of the Knoxville faculty. Some of the faculty at Knoxville also served on the faculty at Martin for several years. These included Prof. Joe Alexander (horticulture) and Prof. Horace Smith (agronomy).

One reason for the expanded program at Martin was to thwart suggestions that Memphis State College might add agriculture and home economics to its curricula.

Prof. John McMahon, who had served as head of the Martin agricultural program, continued in that capacity until 1965 when Dr. O. Glen Hall, a faculty member of the animal husbandry department at Knoxville, was appointed to the position. Prof. Earl Knepp had a great influence on the success of the agricultural programs at Martin, especially the agricultural engineering and dairy programs.

Although Dean Peacock and several of the Knoxville faculty planned advanced courses for the new four-year curriculum at Martin, there was much discussion at the time among the Knoxville faculty about the wisdom of another four-year school of agriculture in the state. Several of the faculty, including Dr. Harold Smith (animal husbandry) and Prof.

UNDERGRADUATE ENROLLMENT IN AGRICULTURE AT UT KNOXVILLE
1896 - 1953

Year	No.	Year	No.	Year	No.
1896-97	6	1917-18	151	1935-36	252
1897-98	12	1918-19	100	1936-37	334
1898-99	24	1919-20	148	1937-38	425
1899-00	58	1920-21	177	1938-39	427
1900-01	32	1921-22	171	1939-40	454
1901-02	23	1922-23	140	1940-41	441
1902-03	37	1923-24	118	1941-42	341
1903-04	14	1924-25	137	1942-43	261
1904-05	21	1925-26	142	1943-44	47
1905-06	22	1926-27	165	1944-45	58
1906-07	26	1927-28	179	1945-46	361
1907-08	24	1928-29	180	1946-47	813
1908-09	23	1929-30	201	1947-48	884
1909-10	39	1930-31	224	1948-49	921
1910-11	57	1931-32	216	1949-50	683
1911-12	77	1932-33		1950-51	683
1913-14	151	1933-34	149	1951-52	579
1915-16	218	1934-35	156	1952-53	577
1916-17	204				

Enrollment during the 1870s was less than 10 and averaged 10-25 in 1880s. Exact enrollment numbers were not available for 1932-33. From 1953-62 enrollment ranged from 400-500.

Horace Smith (agronomy), went to Martin for a quarter and taught the advanced courses for the first time. Dr. Harold Smith returned as dean of the School of Agriculture at Martin in 1967, when Hall became director of resident instruction in the College of Agriculture at Knoxville.

Prof. C. Porter Claxton was the first administrative officer of the junior college, and Prof. Paul Meek held the same position for many years. Both of these men were members of the UT class of 1919, and were officers of the Agricultural Club and also were on the staff of *The Tennessee Farmer* while they were students.

Over the years, many students from the UT junior college at Martin enrolled at Knoxville to complete a B.S. Most of these students came from rural West Tennessee, where agriculture dominated the economy. These students were a very important segment of the agricultural enrollment on the Knoxville campus.

FACULTY AND ENROLLMENT

By 1930, the faculty at Knoxville had increased to 20. The number of regular agricultural students during the depths of the depression, from 1929 to 1935, ranged from 150 to 200. Although there were no women in the four-year agricultural program during this period, the School of Home Economics, which had been made a part of the College of Agriculture in 1923, had about 250 students. Prof. Willson served as dean until his death in 1937. Dr. Moses Jacob was appointed dean of the college then and held that position until 1943.

Following the death of Dr. Jacob, President Hoskins nominated Dr. C.E. Brehm, then director of the Extension Service, as dean of the College of Agriculture. This nomination was actively supported by trustees Clyde Austin and Paul Kruesi. Brehm's appointment resulted in uniting resident instruction and Extension for the first time under the leadership of one person. The third unit, the Experiment Station, remained as an independent line to the president or the dean of the university until the retirement of Dr. Charles Mooers in 1949.

During the 1930s and early 40s, few farm families could afford to finance a university education. Many students worked or obtained loans from the university. This assistance is detailed in a chapter on gifts and scholarships.

UNDERGRADUATE ENROLLMENT IN AGRICULTURE AT UT KNOXVILLE 1963-1990

	UNDERGRADUATE			GRADUATE			TOTAL		
Year	Men	Women	Total	Men	Women	Total	Men	Women	Total
1962-63	355	12	367	103	2	105	458	14	472
1963-64	345	17	362	99	3	102	444	20	464
1964-65	394	24	418	130	2	132	524	26	550
1965-66	495	23	518	164	5	169	659	28	687
1966-67	567	37	604	180	5	185	747	42	789
1967-68	679	35	714	194	6	200	873	41	914
1968-69	768	34	802	198	9	207	966	43	1009
1969-70	750	47	797	184	15	199	932	62	994
1970-71	772	60	832	181	30	211	953	90	1,043
1971-72	793	92	885	227	21	248	1,020	113	1,133
1972-73	733	142	875	176	20	196	909	162	1,071
1973-74	724	220	944	179	32	211	903	252	1,155
1974-75	880	307	1,187	179	48	227	1,059	355	1,414
1975-76	1,129	394	1,523	232	57	289	1,361	451	1,812
1976-77	1,215	417	1,632	230	58	288	1,445	475	1,920
1977-78	1,214	418	1,632	236	62	298	1450	480	1,930
1978-79	1,191	316	1,507	235	62	297	1,426	378	1,804
1979-80	646	416	1,062	240	77	317	886	493	1,379
1980-81	992	359	1,351	228	86	314	1,220	445	1,665
1981-82	870	337	1,207	233	62	295	1,103	399	1,502
1982-83	753	266	1,019	176	61	237	929	327	1,256
1983-84	626	234	860	146	60	206	772	294	1,066
1984-85	528	198	726	142	66	208	670	264	934
1985-86	432	208	640	140	73	213	572	281	853
1986-87	463	193	656	162	77	239	625	270	895
1987-88	442	191	633	153	73	226	595	264	859
1988-89	410	199	609	160	59	219	570	258	828
1989-90	377	231	608	156	65	221	533	296	829
Total	**19,543**	**5,427**	**24,970**	**5,063**	**1,196**	**6,259**	**24,604**	**6,623**	**31,227**

Enrollment greatly decreased during World War II, dipping to a low of about 50 during 1943-44, as most college-age men went into military service or returned to the farm or other ag-related occupations to assist in food production and distribution. Some faculty taught courses other than agriculture during that time; others were used in Extension food production programs. Dr. H.A. Morgan was director of the food production program for Tennessee during this period. About 40 agriculture students and at least three faculty members lost their lives in World War II.

By 1944-45, enrollment had bounced back to more than 350. Then as more veterans returned to take advantage of the G.I. Bill, the number increased to more than 900 in 1948-49.(17) As veterans graduated, the enrollment dropped to around 600 in the early 1950s. Teaching faculty had increased to 37 in 1947 and to 56 in 1950.

The total number of undergraduate students in the college in the next 15 years generally ranged from 350 to about 500. Undergraduate enrollment increased in the following years, reaching a maximum of 1,632 in 1976-77. A large increase during the latter period was due, in part, to a great increase in the number of scholarships available. E.J. Chapman's work in obtaining funds for this program are discussed in the chapter on gifts and scholarships.

Undergraduate enrollment began to decrease in 1979 and continued to decline until 1990. Then numbers began to increase again as new programs, such as those related to natural resources, conservation, and waste management, were added to the curricula and food science was expanded. More emphasis was also given to the recruitment of superior students and to obtaining scholarships that covered more expenses over a longer period of time.

WOMEN IN THE COLLEGE

Although women enrolled at UT as early 1892 (18), few were in agriculture until the early 1970s. Barnwarmin' Queen for 1928, Emily Thompson, was a rare exception. (See more on Barnwarmin' in the chapter on student activities.) In 1962, 14 were enrolled, but by 1990 there were about 300 women students in the College of Agriculture. By the 1990s, they comprised nearly one-third of total enrollment. The first full-time female faculty at the university was hired in 1899. The first woman joined the agricultural faculty in 1970.

GRADUATE ENROLLMENT

The master of science degree in agriculture was approved in 1889 and approval for this degree has been given for all departments — from 1905 for horticulture to 1987 for agricultural extension education. The number, approval dates, and the years of conferring advanced degrees for departments are shown in the table at right.

In 1904-05 the degree was changed to master of scientific agriculture. The first person to receive an M.S. was John F. Voorhees, who received the degree in horticulture in 1911 after completing the B.S. degree at UT in 1909. The next M.S. was awarded to Frank W. Bouson in 1917 in agronomy.(18) Some 2,444 M.S. degrees were conferred in agriculture between 1911 and 1989.

The number of graduate students increased markedly since the 1930s to more than 300 in 1980. The number decreased somewhat in the next decade. However, the need for graduate assistants to improve the quantity and quality of faculty research remained a high priority.

The doctor of philosophy degree was approved for five departments: agricultural economics and rural sociology,

ADVANCED DEGREES IN AGRICULTURE

Master's Degree	**Number**	**Approved**	**Dates**
Agriculture	36	1889	1938-73
Horticulture	44	1905	1911-72
Agronomy	193	1906	1925-72
Dairying	106	1906	1924-73
Animal Husbandry	224	1907	1930-74
Agricultural Economics	391	1926	1926-89
Agricultural Education	172	1928	1928-88
Agricultural Engineering	70	1945	1950-89
Poultry	33	1948	1949-72
Agricultural Extension	207	1959	1959-88
Food Science & Technology	197	1962	1964-89
Forestry	117	1966	1968-89
Ag. Engineering Technology	46	1967	1967-89
Wildlife & Fisheries Science	105	1970	1971-89
Entomology & Plant Pathology*	74	1971	1973-89
Animal Science**	225	1972	1972-89
Ornamental Horticulture	54	1972	1973-89
Plant & Soil Science**	137	1972	1973-89
Agricultural & Extension Ed.***	13	1987	1988-89
Total Master's degrees	**2,444**		

Doctor of Philosophy	**Number**	**Approved**	**Dates**
Animal Science	118	1960	1965-89
Ag. Econ. & Rural Sociology	80	1962	1965-89
Plant & Soil Science	80	1964	1967-89
Agricultural Engineering	20	1966	1972-89
Food Science & Technology	19	1980	1981-89
Total Ph.D. degrees	**317**		

* *Formerly Agricultural Biology. Changed to Entomology and Plant Pathology, 1980.*

** *Animal Husbandry, Dairying, and Poultry combined to form Animal Science. Horticulture and Agronomy combined to form Plant and Soil Science and Ornamental Horticulture and Landscape Design, all in 1972.*

*** *Agricultural Education and Agricultural Extension combined to form Agricultural and Extension Education, 1987.*

AVERAGE FACULTY SALARIES 1983-1990*

Year	**Professor**	**Associate**	**Assistant**	**Instructor**	**All Ranks**
1983	$31,942	$26,257	$22,054	$17,916	$26,915
1984	35,624	29,384	25,264	20,236	31,283
1985	39,361	31,126	26,944	21,728	34,357
1986	41,500	33,767	28,843	22,499	36,769
1987	43,200	35,488	29,459	15,631	37,352
1988	45,783	37,024	31,276	16,356	39,515
1989	47,412	37,864	32,162	22,762	40,963
1990	50,169	39,644	34,373	25,522	43,630 **

* *Source: Office of Institutional Research, December 12, 1991*

** *1990 total for 106 faculty $4,624,780. Includes work for both teaching and research.*

agricultural engineering, animal science, food science and technology, and plant and soil science. The UT Graduate Council was charged with the establishment of policy, approving graduate courses, examining and approving new programs, and analyzing the qualifications of the faculty to teach and direct doctoral students.

SALARIES

Salaries in the past were surprisingly low compared to those of today. For example, the total for departmental salaries for 1951-52 ranged from $19,580 for poultry to $36,181 for animal husbandry. These figures were the total salaries of all faculty and staff, including teachers, researchers and supporting personnel. The average salaries of the faculty for the 1983-1990 period are given in the table on page 12.

COURSE OFFERINGS

The number of courses offered in the college generally greatly increased over time. However, when the system was changed from quarter to semester, many courses were combined. The total number of courses offered during 1993-94 is given in the table at right.

INNOVATIVE TEACHING METHODS

Teaching is one of the oldest forms of communicating thoughts and ideas and most of its forms have been used by someone in the past. However, some unique approaches to teaching and learning have been used in the college.

Generally, students in the college take agricultural courses in several of the nine departments. Integration of the knowledge acquired is necessary in order to apply principles to many problems that cross disciplinary boundaries. In the 1960s, four required nondepartmental interdisciplinary agricultural courses were created at the freshman level. They were animal sciences, plant sciences, social sciences, and engineering. Later a course in food science was added. These team-taught courses served the students well until further revision of the curricula in the mid-1980s.

In 1971, an interdisciplinary course at the upper division level was developed to provide selected students an opportunity to integrate knowledge in a problem-solving environment. Three components were required: an interdisciplinary teaching team, a cross section of 32 students from a variety of disciplines and experiences, and actual farm situations to provide problem orientation. The course was the cooperative effort of four departments. Faculty included Dr. Frank Bell, plant and soil science; Dr. Luther Keller, agricultural economics and rural sociology; Dr. J.B. McLaren, animal science; and Dr. John I. Sewell, agricultural engineering.

AGRICULTURAL COURSES OFFERED 1993-94

Fields of Instruction	Undergraduate	Graduate*
Agricultural & Extension Education	8	15
Agricultural Econ. & Rural Sociology	17	1
Agricultural Engineering	17	13
Agricultural Engineering Technology	7	12
Agriculture	6	0
Animal Science	29	24
Animal Science-Veterinary Medicine	0	10
Entomology and Plant Pathology	4	14
Food Science and Technology	18	17
Forestry	17	21
Forestry, Wildlife & Fisheries	11	3
Wildlife and Fisheries Science	8	12
Ornamental Hort. & Landscape Design	21	14
Plant and Soil Science	25	22
Total	**188**	**198**

Includes special topics, problem courses, thesis and seminars

** Excludes 57 400-level courses offered for both graduate credit and for advanced undergraduates.*

Objectives of the course were: to facilitate a better understanding of a systems approach to management decisions among teachers in various agricultural disciplines; to provide an interdisciplinary learning experience for upper division students; and to apply basic principles, concepts, and information obtained from various academic disciplines in a system analysis framework to management decision-making, using a farm business operation as a case study.

Farm operation and business studies included management, cropping systems, livestock, labor, environmental protection and management, facilities, and finances. Students worked as a team or task force in making decisions toward a common set of goals. The course included some aspects of independent study, field experience and personal relations with others; emphasized problem solving; and offered leadership experience — all valuable skills for entering the real world of agricultural business. Students were grouped into task forces and reported results of the deliberations and decisions in formal oral presentations, task force reports, and individual reports. The course continued as agricultural management systems analysis.

For many years the dean of the college taught an orientation course for new students, typically including a history of the college, national and international agricultural issues, and trends for the future.

In 1993-94, a nondepartmental class was taught concerning the application of computers in agriculture and natural resources. A special course was also available for advanced students with outstanding scholarship records.



Students learned plant science at their own pace and on their own time in the innovative audiotutorial lab.

AUDIOTUTORIAL TEACHING

In the 1960s Dr. Sam Postlewait, professor of biology at Purdue University, developed a system of individualized teaching and learning called audiotutorial. The system included audio tapes, plant and animal material, slides, single concept movies, and other teaching aids that students used individually in carrels. This type program was widely adopted in science courses throughout the country.

Following a series of seminars by Postlewait, UT agricultural faculty developed a similar system for agriculture 1140, the introductory, interdisciplinary, freshman-level course in plant science. Almost 300 students were enrolled in this course for several years. Beginning faculty for the class were Dr. Homer Swingle, Prof. Horace Smith, and Prof. Joe Alexander, who was later replaced by Prof. Larry Skold.

Dr. Neal Peacock, college dean, encouraged the faculty from the beginning and was instrumental in obtaining funds for equipment to start the program. Supplements to departmental funds included grants from the University Learning Center and from the Extension Service. A learning center was established on the second floor of McCord Hall, and then on the first floor of Ellington Plant Sciences Building. Students came at convenient times, often at night, to listen to tapes, study plant materials, view slides and movies, and read publications. Learning was guided by a workbook and was supplemented by one lecture and recitation per week.

DIAL-A-TUTOR PROGRAM

Many students communicate better and more freely with other students than with professors. With this concept in mind, Dr. Frank Bell began a unique teaching-learning aid in 1969. Several students in the introductory soils course volunteered as leaders and were given extra instruction in subject matter. On nights before exams, and at other times, these students manned telephones in the department office from 7 to 11 p.m. to answer questions for other class members. Bell saw evidence that both the students who were seeking help and those who were tutors benefited from the program.

Comments from students indicated that this was a successful, innovative teaching-learning technique. Several other professors in the college have successfully used students as teaching assistants.

STUDENT RECRUITMENT

Seldom have there been enough trained professionals to fill all the positions available in agriculture and natural resources, and in the 1980s and early 1990s there was a national decline in college enrollment.

Prospective students often saw agriculture as being production-oriented and nontechnical in nature. To combat this problem, the college placed considerable effort in presenting the message that agriculture and natural resources is the application of science and technology to food, fiber, and environmental issues.

Recruitment of students has concentrated on four major audiences. First, high school juniors and seniors are contacted through Extension agents and 4-H, high school agriculture teachers and FFA, alumni, career days, and on-campus visits. Second, recruiters made contacts with high school science and math teachers and guidance counselors in group meetings and brochures. Third, prospective community college transfers were invited to visit the campus and observe the available programs. Finally, students on the UT campus who had not yet chosen a major were encouraged to investigate agricultural programs.

The availability of scholarships played an important part in the recruitment of good students. Especially important were scholarships that range from $8,000 to $12,000 per year. The presentation of scholarship certificates by a representative of the college to recipients at high school functions gave good publicity for the teaching program of the college.

Promotional brochures, videos, displays, and articles were regularly revised to inform prospective students of the newest programs in the college. Recruiting and retaining the best students is a challenge because five other public institutions in Tennessee offer undergraduate agricultural degrees.

Faculty advisors, extracurricular activities, judging events, professional student organizations, and awards each contribute to retaining students. A report on developing a contemporary program in agriculture recommended that a

full-time recruiter be added to the staff to assist the deans in this vital function.

VARSITY VISIT

Varsity Visit was started in 1950 to acquaint high school-age students with the University of Tennessee, and especially to inform them about the undergraduate programs in agriculture and home economics.

This annual event for members of the Future Farmers of America and Future Home Makers of America began with a Friday night stay in Knoxville. A social event and entertainment were held in the Alumni Gymnasium during the early years. On Saturday morning, the students met with deans and faculty of the two colleges who described programs and facilities. Lunch was served, and in the afternoon the visitors attended a UT football game. Members of this group were always conspicuous with their UT orange and white caps and loud cheers.



FFA members from the Horace Maynard Chapter sport the official orange and white Varsity Visit caps on campus before a football game about 1976.

Varsity Visit continues to be a popular event for students and serves as an effective recruiting tool for the college. Held on the agriculture campus in recent years, it became a Saturday-only program for students interested in agriculture and natural resources.

AFRICAN-AMERICAN STUDENTS

In 1890, a second Morrill Act authorized establishment of colleges for black persons in states where a distinction was made by race or color. Tennessee State College, now Tennessee State University, was to benefit from this act.

A course of study in agriculture and mechanical arts at Knoxville College had been created in 1891 by the University of Tennessee. It was known as the Industrial Department. Although it maintained a connection with the Literary Department of Knoxville College, it was a distinct department of UT. This arrangement met requirements of an 1869 state statute which directed that "no citizen of this state otherwise qualified shall be excluded from the privileges of the university by reason of his race or color; but the accommodations for persons of color shall be separate from the white."

The president and professors of agriculture at UT supervised the course of study, equipment, and methods of instruction used at Knoxville College. The four-year program in 1910-11, as recorded in the *University Register*, included instruction in general agriculture, horticulture, dairying, feeds and feeding, stock judging and breeding, agricultural chemistry, plant breeding, and soils and farm management.(19)

Knoxville College had a farm of 165 acres 90 miles away, and the college grounds of 75 acres, making a total of 240 acres for use by the agriculture professor. In 1910, there was one professor and eight students in the four-year agricultural course. All students enrolled in the normal and preparatory courses were also required to take a course in theoretical instruction in agriculture.

The UT board of trustees, based on the 1869 statute, excluded African-American undergraduates from enrolling at the university until 1960. University President Dr. Andy Holt assigned Dr. Herman Spivey, a UT vice president, to prepare a recommendation to the board of trustees that the policy should be changed. On November 18, 1960, the board changed the policy and the first black undergraduate students were admitted for the winter quarter of 1961.

The number of African-American students enrolled in agriculture has always been relatively low. The number of black undergraduate and graduate students was 27 and 17, respectively, in 1980. The percentage of total enrollment ranged from 1.9 to 2.9 from 1982 to 1985, and from 4.2 to 5.5 from 1986 to 1990. In 1987, the number of minorities enrolled in agriculture nationwide was 4.6 percent.

In 1988, Dr. Handy Williamson, Jr., became the first African-American to head a department in the college. He worked tirelessly to influence black enrollment in the college. Dr. Michael O. Smith joined the faculty of the animal science department in 1988 as a teacher of poultry production and also recruited and advised minority students.

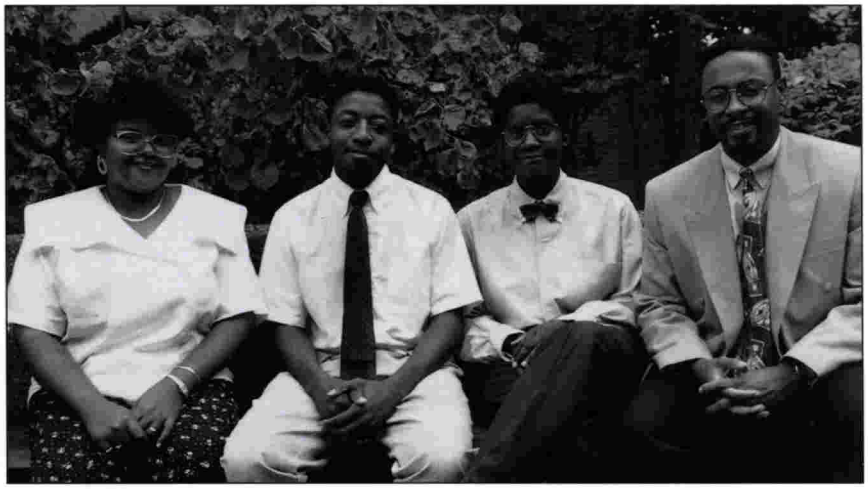
The Department of Forestry, Wildlife and Fisheries entered a contract with the U.S. Forest Service in 1983 to encourage minority students to consider a career in forestry. Students received financial aid and a chance to work in a national forest to earn funds for their education.

Although the number of black graduates of the college

has been small, many have made important contributions. William Brown, who grew up on a farm, received the B.S. degree in 1982, the M.S. in 1987, and then began working on an Ed.D. degree while employed in the Division of Continuing Education at UT. Prior to that, he taught high school agriculture for six years in Blount County.

Ron Davis received the B.S. and M.S. degrees in forestry and then took a position in the land resources division of TVA. He has assisted in recruiting efforts and advising black students for the college.

Michael Heard also received two degrees in forestry from UT. He spent six years with the Tennessee Department of Conservation. Then he joined the staff of the Department of Forestry, Wildlife and Fisheries as minority student recruiter and was responsible for many capable students enrolling at UT. He later joined the faculty of the Department of Forestry at Alabama Agricultural and Mechanical College.



A new chapter of Minorities in Agriculture, Natural Resources, and Related Sciences (MANNRS) was begun at UT in 1991. Among 20 students participating were RaSharon Moore, member-at-large representative; Stephen Thomas, national vice president; and Jerri Marr, UTK chapter president. Chapter advisor was Michael Heard (right).

In 1991, a chapter of Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS) was established at UT. Members include students from several departments.

MAJOR ISSUES AND CONCERNS

Although undergraduate programs have done an excellent job of training agricultural scientists needed by our society in the past, issues were raised in the late 1980s and early 1990s concerning whether colleges were adequately serving the needs of students in agriculture and natural resources. It was suggested that colleges and departments needed to more clearly define their mission and objectives to be of greater service in the education of agricultural students.

Results of a survey of agricultural administrators and faculty from institutions throughout the United States, including some from the University of Tennessee, indicated that faculties generally were not familiar with the major goals and objectives of their institutions and departments.(20)

It was also suggested that agricultural educators traditionally had been primarily concerned with technology for the production of food and fiber without teaching how to apply that technology. Many agricultural leaders said that curricula and courses should include more opportunity for critical thinking and problem analysis.(21) Communication skills including writing, speaking, and computer competence, as well as interpersonal and leadership skills also should be emphasized, they said.

Changes in programs have not always kept pace with the needs of industry and business. In a fast-changing world, agricultural students needed more of an understanding of the major national and international problems and issues in agriculture and natural resources.

In a 1990 survey of University of Tennessee graduates, alumni in general seemed to be very well pleased with the content and quality of their educational experiences. In fact, 86 percent of those responding gave the College of Agriculture a rating of good or excellent. But alumni saw a need for more emphasis on recruiting to increase enrollment, and a need to modify programs and courses to meet a rapidly changing agricultural industry.(22)

Dr. D.M. Gossett, vice president for agriculture, appointed a faculty committee in 1990 to review the survey, to evaluate the undergraduate teaching programs, and to make recommendations for changes. The committee concluded there was indeed a need to redesign educational programs to better reflect the requirements of a contemporary agricultural industry and natural resource management.(23)

The committee recommended that the name of the college be changed from College of Agriculture to the College of Agricultural Sciences and Natural Resources to better reflect the actual programs offered and needs of the future. The group also indicated that a long-range plan for the college should be made and regularly evaluated by administrators and teaching faculty.

The committee suggested efforts to improve the image of agriculture for the public, university colleagues, state leaders, alumni, employers, prospective students, and school counselors. The committee concluded that teaching could be improved by assisting new, inexperienced teachers, using

teacher evaluation programs, providing opportunities for development through seminars, study leaves, salary adjustments and awards, and improving tenure and promotional procedures for teaching performance.

The committee also recommended development of mini overview courses for students not majoring in agriculture. These courses would address major agricultural issues and opportunities in agriculture and natural resources.(24)

In 1993, UT Chancellor Dr. Bill Snyder formed a task force on "The First Year Experience." Although this task force considered issues affecting all beginning students in the university, some conclusions and recommendations were appropriate to the problems of agricultural students.(25) Among the findings were recommendations to improve the early orientation process, to improve the advising of beginning students, and to improve classroom instruction by using more experienced teachers in beginning classes.

The task force recommended that "a campus culture be created that treats teaching as an intellectual activity of the faculty that is as fully as valued as research, and teaching faculty must be rewarded for a job well done." It also recommended that awards for excellence in teaching should be made a part of the teacher's permanent salary base rather than a onetime award.

For many years the College of Agriculture had a teaching improvement committee which scheduled programs to enhance teaching. Many of the speakers were educational psychologists or teachers in the College of Education.

As enrollment in the college decreased and the amount of research increased, the percentage of time spent on teaching by most faculty decreased greatly. The percentage in 1993-94 averaged approximately one-third.

TOWARD THE FUTURE

Administration in the UT College of Agricultural Sciences and Natural Resources has constantly looked for new programs to prepare students for the real-world needs of agriculture and natural resources. These include:

–maintaining up-to-date course content to meet changing conditions
–expanding the number and scope of internships to give students hands-on experience
–improving communication skills
–giving students the opportunity to develop skills in problem solving
–increasing opportunities for international experience
–collaborating between departments and with other colleges in the development of courses and curricula
–and placing more emphasis on recruitment of high quality students and on career counseling.(26)

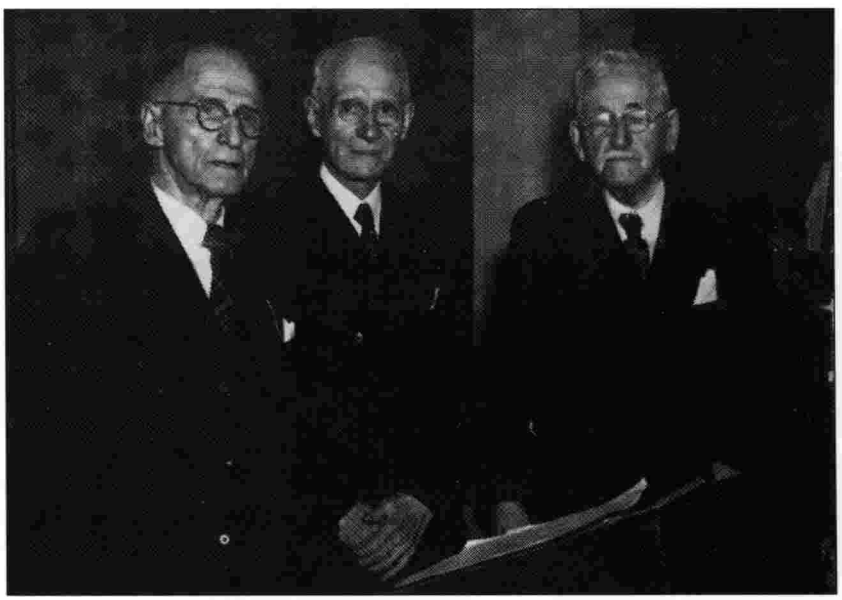
REFERENCES

1. Edward T. Sanford, *Blount College and the University*, An historical address delivered before the Alumni Association and members of the university. Knoxville, TN: University of Tennessee, June 12, 1884.
2. Alfred C. True, *A History of Agricultural Education in the United States, 1785-1925*. Washington DC: United States Department of Agriculture, Misc. Pub. No. 36, 1929.
3. *The University Register, 1877-78*. Knoxville, TN: University of Tennessee.
4. *The University Register, 1878-79*.
5. *The University Register, 1879-80*.
6. John R. Montgomery, "The Volunteer State Forges Its University, 1887-1913." *University of Tennessee Record,* Vol. 69, No. 6, 1966.
7. See No. 6.
8. *The University Record,* Knoxville, TN: University of Tennessee, 1901.
9. See No. 6.
10. See No. 6.
11. Harvey B. Vanderford, Florence F. Vanderford Davis, *A Tribute Honoring Major Charles F. Vanderford*. Department of Agronomy, Mississippi State University, April 1980, Monograph 80-1.
12. See No. 6.
13. *The University of Tennessee Record, 1904*.
14. See No. 6.
15. Mouzon Peters, *The Morgan Story: Harcourt A. Morgan, Tennessee Agricultural Hall of Fame*. Unpublished history and collection of letters and pictures, 1952.
16. See No. 2.
17. N.D. Peacock, B.J. McSpadden, and Genevieve H. Wingo, *Employment Opportunities for Agricultural Graduates of the University of Tennessee,* Alumni Survey. Knoxville, TN: College of Agriculture, University of Tennessee, 1951.
18. Diana Crisp Lopez, *Graduate Education at Tennessee: A Historical Perspective*. Knoxville, TN: The Graduate School, University of Tennessee, 1990.
19. *The University of Tennessee Record,* Vol. 13, No. 2, March 1910.
20. G.M. Love, *Undergraduate Education in Agriculture.* Pennsylvania State University in Cooperation with the Office of Science and Education Administration, United States Department of Agriculture, 1989.
21. Gene M. Love and Edgar P. Yoder, *An Assessment of Undergraduate Education in American Colleges of Agriculture.* Pennsylvania State University College of Agriculture, 1989.
22. William J. Bales and William L. Sanders, *College of Agriculture Alumni Survey*. Knoxville, TN: University of Tennessee, February 1990.
23. John E. Foss et al, *Challenge For the Future: Developing a Contemporary Program In Agriculture*, A Report to the Institute of Agriculture. Knoxville, TN: University of Tennessee, November 1990.
24. See No. 23.
25. Task Force on the First Year Experience, *Report on Improving the Educational Experience of First-Year Students.* Knoxville, TN: University of Tennessee, September 1993.
26. Sharon Littlepage, "Invest in Yourself," *UT Agriculture*, Vol. 9, No. 3. Knoxville, TN: University of Tennessee, Winter 1993.

CHAPTER II

PROFILES OF LEADERSHIP

Agricultural teaching programs have been administered by many able leaders during the University of Tennessee's long history. Early leaders were chairmen of the agricultural department; others were vice dean of resident instruction or vice dean of the College of Agriculture. Some held the title of deans of the college when that included resident instruction, the Experiment Station and the Extension Service. Others have held the title of vice chancellor or vice president for agriculture. Vice presidents and many deans have been responsible for resident teaching programs but have not directly supervised day-to-day operations.



Former UT presidents (from left) Harcourt Morgan, James Hoskins, and Charles Dabney visit at festivities marking UT's 150th birthday in 1944. Dabney and Morgan were early advocates of scientific and technical education.

PROF. HUNTER NICHOLSON

Prof. Hunter Nicholson was the first professor of agriculture and horticulture at UT. He also served as chairman of the department of agriculture from 1871 to 1879, and as professor of natural history from 1879 to 1885. He was the first librarian for UT, which at the time was known as East Tennessee University.

Nicholson was a proponent of the study of the classics by agricultural students. He strongly defended the agricultural program during a period of time when the legislature was critical of the university and when there was some doubt that UT would be the sole land-grant institution in the state.

PROF. JOHN M. MCBRYDE

Prof. John M. McBryde was chairman of the department and professor of agriculture, horticulture, and botany from 1879 to 1882. He was also largely responsible for the establishment of the University of Tennessee Agricultural Experiment Station in 1882, one of the first five in the nation. McBryde was responsible for the first direct request ever

made by the university for annual support from the state.

Dr. Charles Dabney, UT president, called McBryde the real father of scientific agriculture in the South. He was a native of South Carolina and was well known for scientific experiments on his farm in Virginia. He was president of South Carolina College, the future University of South Carolina, from 1882 to 1891. He was asked to return to the University of Tennessee as president and director of the Experiment Station in 1886 and he accepted, then later declined the position for health reasons. When agriculture was moved to Clemson, McBryde left South Carolina and served as president of Virginia College (later VPI) from 1891 to 1898.

PROF. JOHN W. GLENN

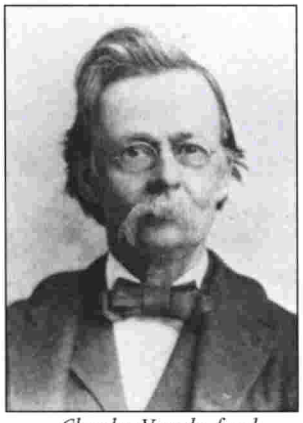
Prof. John W. Glenn replaced McBryde in 1882 as professor of agriculture and became chairman when agriculture was made a distinct department. He was the first director of the Experiment Station. Glenn was an alumnus of the University of Georgia and taught at East Alabama College, later renamed Auburn University. He remained at the University of Tennessee until 1887.

PROF. CHARLES S. PLUMB

Prof. Charles S. Plumb replaced Glenn in 1887 and remained until 1890 when he left to join the staff of the Indiana Experiment Station. Plum obtained the B.S. degree from Massachusetts Agricultural College. He was assistant director of an experiment station at Geneva, New York, before coming to Tennessee. He organized the first known athletic association at UT in 1889.

PROF. CHARLES VANDERFORD

Prof. Charles Vanderford served as chairman of agriculture from 1891 until his death in 1899. He was a major in the Confederate army, attended an academy in Virginia, and was an outstanding farmer in Rutherford County before coming to the University of Tennessee. He is best known for his early research, for the teaching of soils, and for his book *The Soils of Tennessee.*



Charles Vanderford

PROF. ANDREW M. SOULE

Prof. Andrew M. Soule served as chairman of the school of agriculture and director of the experiment station from 1899 until 1904, when he became director of the Virginia Agricultural Experiment Station.

Soule began the first short course program at UT in 1900. This program served more than 6,000 farmers from 1900 to 1915, and was open to anyone over the age of 16.

Soule contributed numerous articles to agricultural publications. He later became the president of the University of Georgia.



Andrew Soule

DR. HARCOURT A. MORGAN

Dr. Harcourt A. Morgan came from Louisiana State University to the University of Tennessee in 1905 as professor of zoology and entomology and as director of the Experiment Station. Morgan served as chairman of the School of Agriculture from 1905 to 1913. The school was made a college in 1913 and he served as the college's first dean from 1914 to 1919, when he became UT president. He continued as dean until 1923.

As dean, Morgan had a great influence on obtaining state funds for the university. He assisted his longtime friend from Louisiana, UT President Dr. Brown Ayres, in obtaining the first million dollar appropriation for the university from the state.



Harcourt A. Morgan

Morgan succeeded Ayres as president and served from 1919 to 1934. He was appointed by President Franklin D. Roosevelt in 1933 as one of the first directors of the Tennessee Valley Authority. He was on leave from the university in 1933. Morgan served on the TVA board until 1948, and was chairman from 1938 to 1941.

Morgan rendered many services to the area, region, and nation. He received an award for distinguished service in agriculture from the American Farm Bureau in 1937. He was named "Man of the Year" by *Progressive Farmer* in 1940. He was honored by the university when Agricultural Hall was renamed Morgan Hall. The UT chapter of Alpha Zeta, the agricultural honor fraternity, is also named for him.

Upon the recommendation of the president of the Agricultural Club, Ray Spann, Dr. Morgan was nominated to the Tennessee Agricultural Hall of Fame and was elected in 1952.

The Hall of Fame tablet that is exhibited in Morgan Hall describes him as "Agricultural Scientist, Teacher, Public Servant, Philosopher, Builder of Soil and Men."

H.A. Morgan's attire was called into question by the selection committee considering him as successor to university President Brown Ayres. Acting President Hoskins sought to reassure. Morgan was "not dressed like a college man," Hoskins said. "He works with the farmers but we'll tell him to fix himself up."

PROF. CHARLES A. WILLSON



Charles A. Willson

Prof. Charles A. Willson was assistant dean of the college from 1919 to 1923, and then served as dean until his death in 1937.

Willson taught animal husbandry and dairy husbandry at UT beginning in 1910, having served as professor at Kansas State College and the University of Missouri following his graduation from Michigan State College.

Enrollment in the college during his administration grew from 118 in 1923 to 425 in 1937. Willson was greatly loved by the students and admired by many farmers for his contribution to state agriculture. In addition to his many contributions to rural magazines, he was the author of a book, *Arithmetic in Agriculture and Rural Life*, for use in secondary schools.(1) Some students recalled playing very lively chess games with Prof. Willson in his home.

DR. MOSES JACOB

Dr. Moses Jacob, after serving about a year as acting dean of the College of Agriculture and director of resident teaching following the death of Dean Willson, became dean of the college in 1937 and served until 1943.

A veterinarian, Jacob was known for his splendid but formal lectures in veterinary science.



Moses Jacob

Jacob came to UT in 1900 as a part-time instructor after receiving the doctorate in veterinary medicine from the University of Pennsylvania. He held the chair of veterinary medicine at Iowa State College during 1903-1904, then returned to UT as professor of animal husbandry and veterinary medicine. He was the state veterinarian from 1915 to 1921 and had one of the oldest veterinary practices in the South.

In 1921, Jacob was appointed head of animal husbandry and served in that position also while dean. He was actively involved in the affairs of the Tennessee Valley Agricultural and Industrial Fair for many years and served as its president. The Jacob Building at Chilhowee Park, completed just prior to World War II, bears his name.

Jacob's many interests included the improvement of mules through better jacks and jenny breeding programs. He was an outstanding livestock judge.(2)

Dr. Cloide Everett Brehm, with his trademark battered felt hat and bow tie, secured much-needed funding as president of UT during the period of rapid expansion after World War II.

DR. CLOIDE EVERETT BREHM



C.E. Brehm

Dr. C.E. Brehm became dean of the college in 1943, in addition to his duties as director of the Agricultural Extension Service. His contribution to teaching was mainly in finance and administration, as Dr. Neal Peacock handled day-to-day administration of resident instruction.

Brehm became director of the Experiment Station and acting president of UT in 1946, and president in 1948. He became a marketing specialist with the UT Extension Service in 1917. Brehm was a graduate of Pennsylvania State College.

DR. JOHN H. MCLEOD


John H. McLeod

Dr. John H. McLeod became dean of the college and director of the Experiment Station in 1948. Like Brehm, McLeod's leadership of the college was in general administration and financial decisions rather than the direct supervision of the teaching program. He was appointed director of the Extension Service in 1947 and served in these positions until his retirement in 1957.

McLeod came to UT in 1921 as a swine specialist. As a youngster in Texas he had been influenced by the work of Seaman Knapp, the "father" of Extension. He was a graduate of Texas A & M College.

DR. WEBSTER PENDERGRASS


Webster Pendergrass

Dr. Webster Pendergrass became dean of agriculture in 1957, vice chancellor for agriculture in 1968, and vice president for agriculture in 1970. He held the latter position until his retirement in 1979.

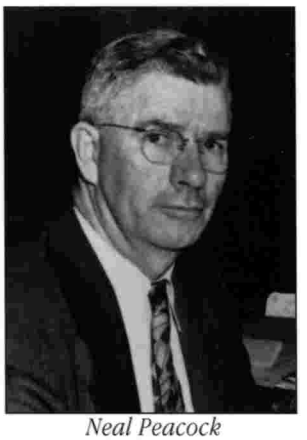
Pendergrass' contributions to the teaching program were in the areas of policy and administration. He served as leader of Extension agronomy from 1947 to 1957. Prior to that he was a county agent from 1936 to 1944 and agronomy instructor in 1946-47. He served the university 43 years.

Pendergrass was the first native Tennessean and alumnus of the university to serve as dean of agriculture. He held the B.S. and M.S. degrees from UT, and a Ph.D. in public administration from Harvard.

DR. NEAL D. PEACOCK

Dr. Neal D. Peacock served as vice-dean of the college from 1943 to 1957, when Dr. C.E. Brehm and Dr. J.E. McLeod were deans, and then as vice-director of resident instruction from 1957 until his retirement in 1967.

Peacock came to the college in 1921 following his graduation from Purdue and two years as horticulturist at the University of Georgia. He also served from 1921 to 1923 as field representative for the Tennessee State Horticultural Society. He was head of the department of horticulture from 1923 until 1950 and had a great interest in farm and home grounds improvement. Hundreds of students were enrolled in his courses in this area, and many plants on the ag campus are living memorials to his planning.


Neal Peacock

Peacock was active in the resident instruction section of the Association of Land-Grant Colleges and State Universities and was very influential in the improvement of teaching of agriculture through its Southern Section. He received the first "Award of Appreciation" from that group in 1967.

Peacock was also leader of the UT-India Educational Program from 1956 to 1967. He received his undergraduate degree from Purdue University, the master's from the University of Tennessee, and the Ph.D. from Michigan State University.

DR. O. GLEN HALL

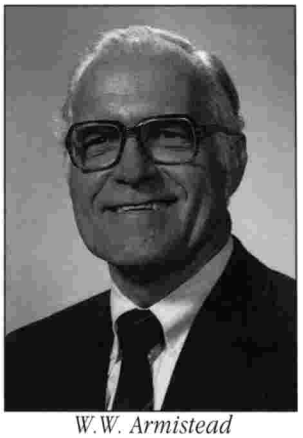
Dr. O. Glen Hall was appointed dean of resident instruction in 1967 and dean of the College of Agriculture in 1968, when Dr. Webster Pendergrass became vice chancellor for agriculture.


Glen Hall

Hall came to the University of Tennessee in 1955 after receiving degrees from Berea College, the University of Kentucky, and Iowa State University. He was associate professor of animal husbandry until 1964, teaching courses and conducting research in animal digestion. He was professor and head of the department of agriculture at the University of Tennessee at Martin from 1965 to 1967.

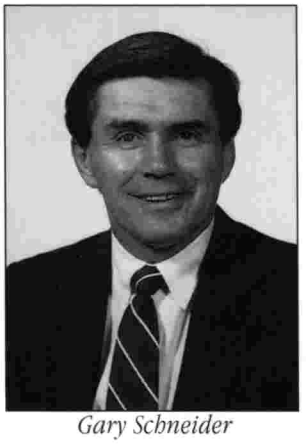
During his tenure, many reorganizations, consolidations, and additions occurred in the college. The highest enrollment of both undergraduate and graduate students took place during his administration. "We work hard to maintain a friendly, involved atmosphere with students," he said. "We're going to work hard to maintain that reputation and improve it." Dr. Hall was appointed interim chancellor for academic affairs of the university on July 21, 1992.

DR. WILLIS W. ARMISTEAD


W.W. Armistead

Dr. Willis W. Armistead was appointed vice president for agriculture in 1979 and served until his retirement in 1987. He was dean of veterinary medicine at both Texas A&M University and Michigan State University before being appointed dean of the College of Veterinary Medicine at the University of Tennessee. Armistead was the only administrator of the College of Agriculture who had not served the college in other positions prior to becoming vice president for agriculture.

DR. GARY SCHNEIDER


Gary Schneider

Dr. Gary Schneider was appointed in 1985 as the first associate dean of the college. He was involved in student development, which included student recruitment, scholarships, student retention, and job placement. He was also involved in curriculum changes in all college departments.

Schneider was head of the department of Forestry, Wildlife, and Fisheries from 1977 to 1985. Before coming to UT, he taught at Michigan State University and Steven F. Austin State University in Texas. Dr. Schneider was appointed acting dean of the College of Agricultural Sciences and Natural Resources in August 1992 after Dr. Glen Hall was chosen as interim Vice Chancellor for Academic Affairs.

DR. D.M. (PETE) GOSSETT


D.M. Gossett

Dr. D.M. Gossett became vice president for agriculture in 1987. Prior to that, he had been a weed specialist for the UT Agricultural Extension Service, superintendent of the West Tennessee Experiment Station, and dean of the Agricultural Experiment Station.

Gossett is a native Tennessean and a graduate of the University of Tennessee at Martin, the University of Illinois, and North Carolina State University.

REFERENCES

1. *Tennessee Farmer*, Vol. XXIX, October 1941.
2. *Tennessee Farmer*, Vol. XXX, May 1937.

CHAPTER III

BUILDINGS, FARMS, LIBRARY AND OTHER FACILITIES

THE UNIVERSITY FARM

In 1869 trustees of the university purchased the university farm using $30,000 of the $396,000 federal land grant fund. The 285- acre tract on Kingston Pike fulfilled requirements of the Morrill Act that at least 200 acres be owned by the Agricultural College.(1)

This original college farm was used for research for many years and also as a field laboratory for instruction. It was home to cultivated research plots and to livestock facilities. The area also became home for Institute of Agriculture buildings and grounds. A portion was still used for ornamental horticulture and turf grass research in the 1990s.



Morgan Hall (circa 1921), originally called Agricultural Hall, was flanked by Temple Hall (center) and UT President H.A. Morgan's home (left). Always modest, Morgan did not want the new building to bear his name. (view from Kingston Pike)

As early as 1889 this property, consisting of two tracts, was called Riverview Farm. For many years it was referred to as the Agricultural Farm, University Farm or, simply, the Farm. In recent years, the UT ag campus has been the most popular name with students and with the community.

At one time the university also owned a horticulture and fruit farm, located about one half mile north of the Agricultural Farm on Middlebrook Pike. Funds were needed for new building construction, so 49 acres of this farm were sold at $1,000 an acre to pay most of the cost of Science Hall, which was completed about 1892.(2)

In 1903 the university received its first direct appropriation from the state. The funds were used in 1904 to purchase thirty-six acres known as the Thomas Land. One source describes the area as "rich river-bottom land that separated almost all of the university farm from the Tennessee River."(3) Another source describes it as being located along Kingston Pike.(4) The 1905 *University Record* lists the area as 145 acres; therefore, a portion may have been sold at one time. This property was described in 1905 as being "just outside the corporate limits of Knoxville."

CHEROKEE FARM

Another farm was purchased in 1916. Knox County provided $125,000 and citizens and corporations of Knoxville and Knox County added $18,000 to purchase about 570 acres of land (some sources give the acreage as 465) for the College of Agriculture. This land, to the south and west of the Tennessee River, is known as Cherokee Farm. Early on, efforts were made to make the farm a commercial success; however, the operation was soon transferred to the Experiment Station for its operation and upkeep.(5)

Cherokee Farm has been used as a teaching laboratory by the departments of dairying, animal husbandry, horticulture, forestry, and poultry. The animal husbandry department moved its operations to a Blount County farm later. The total acreage of the farms available for the teaching program in 1916 amounted to about 800 acres.(6) Many students, especially those majoring in dairying, have worked on Cherokee Farm.

The horticulture department had its orchards for a teaching laboratory on a steep hillside facing the river for many years before moving to the Plant Science Field Laboratory. A roadside market building near this tract and the river bridge not only served as a market for surplus fruits and vegetables, but also was a place for students to live economically. A portion of Cherokee Farm off Cherokee Trail is still used as a field laboratory by the department of forestry.

Following World War I, a training program for disabled veterans was initiated at the university with James P. Hess as director. One of the programs was in poultry. At about this time, Jefferson Hall, which stood near where Ayres Hall is now located, was torn down. Hess obtained lumber from this building to erect a poultry plant on the agricultural campus for this special training program. Some of the lumber was reused in building a new poultry plant on Cherokee Farm.(7) A more modern poultry plant is still located on Cherokee Farm. The dairy farm operation was relocated from the University Farm to Cherokee Farm in 1935.

The University Hospital and exit and entry ramps on Alcoa Highway occupy large areas of Cherokee formerly used for livestock teaching and research programs.

MORRILL HALL

A cornerstone was laid in 1880 for UT's first building for agricultural classrooms. Agricultural Hall, later named Morrill Hall, was completed in 1882 at a cost of $3,278. The original brick building was two-stories measuring approximately 30 by 60 feet and located on the southeast corner of the main campus. Morrill Hall was enlarged in 1888, and the East Tennessee Farmers' Convention, which was in session in Knoxville, participated in laying of the cornerstone. It was appropriate that the convention participate since the organization had been active in agricultural and university affairs from 1875, when the convention was founded, and had selected the university as its meeting place. The new addition was 40 by 60 feet and was completed for $6,800. This building, as well as the garden, vineyard, and orchard, were on the south side of the "Hill" to the south of Science Hall.



Morrill Hall, circa 1888, had botany labs, library, lecture rooms with "magic lanterns," and a museum. A culture room had a fireproof interior that could be "perfectly sterilized by fire whenever desired." Later renamed Carrick Hall, it burned in 1942.

Morrill Hall contained laboratories and classrooms for agriculture, physics, botany, chemistry, and horticulture. Morrill also housed offices of the Experiment Station as well as an agricultural museum and library, which contained about 5,000 volumes and reports from experiment stations.(8) As income from Morrill Act funds was prohibited for the use of buildings, the funds for this building apparently were obtained by faculty entrenchment.(9)

The first university greenhouse or conservatory was constructed behind Morrill Hall at a cost of about $1,550. This structure was 20 by 13 feet and was described in the 1880-81 catalogue as "where new seeds are tested and promising varieties multiplied by eyes and cuttings." The board of trustees adopted a recommendation that the greenhouse be made primarily a part of the teaching program of the university, with the sale of plants and flowers be "incidental and subordinate" to the educational objectives. Tropical plants, especially the banana plant, grown in this first greenhouse apparently were of great interest to Knoxville citizens for their Sunday afternoon visits.(10)

The old agricultural building was renamed Carrick Hall, for the first and only president of Blount College. Carrick was used by the department of Civil Engineering until it burned in 1942.

THE SECOND MORRILL HALL

In 1907, the board of trustees recommended and the state legislature approved $40,000 for a new Morrill Hall to house the School of Agriculture. It was four stories tall, with a basement, had a front of 160 feet and a depth of 60 feet. It housed agronomy, agricultural chemistry, animal husbandry, dairy husbandry, horticulture, entomology, zoology, the library, and offices of the Experiment Station.

The new Morrill Hall was located about 300 feet west of Barbara Blount Hall on the "Hill" above Shields-Watkins Field. After the agricultural departments moved to the agricultural campus in 1921, Morrill was used by the departments of zoology, botany, bacteriology, and entomology. It burned in 1933. Part of the area is now occupied by the Alumni Memorial Gymnasium. The names of the two buildings first occupied by the department of agriculture, Morrill and Carrick, live on as the names of residence halls.



The second Morrill Hall, circa 1907, was located near the present site of Alumni Memorial Gym, just above Neyland Stadium.

OLD HALL AND FARM BUILDINGS

Old Hall, also known as the Club House, was built on the farm property in 1894, about where Morgan Hall now stands. This two-story brick and stone building served as a dormitory for twenty-five to thirty agriculture students. It also contained an office, a room for a matron, a kitchen, a dining room, a seed laboratory and a reading room for students and the agricultural professors.

A "handsome" dairy barn was built in 1899 at a cost of about $5,000 to house the 30-cow dairy herd. This barn measured 56 by 88 feet and had six distinct compartments: a dairy stable, seed room, silos, storage barn, calf stable, and tool and implement sheds.(11)

Dairy Hall, constructed in 1899 -1900, was also in the area where Morgan Hall now stands. "...where commercial dairying, farm dairying, the manufacture of butter and cheese and milk testing will be taught. This will strengthen the work of the agricultural course materially and afford an opportunity for dairy instruction adapted to the needs of southern farmers." The facilities were described as equal to many commercial companies. The cost of this building was about $15,000.(12)



The UT Farm, just after the turn of the century, featured a building known as The Clubhouse, plus experimental plots and some livestock. The building, razed in 1919 to make room for Morgan Hall, served as a dormitory for some ag students.

OLIVER P. TEMPLE HALL

The East Tennessee Farmer's Convention gave the university about $5,000 to erect a convention hall on the agricultural campus. This structure was completed in time for the 1912 convention meeting and was named in



Oliver P. Temple Hall, named for the university trustee, was completed in 1912 by the East Tennessee Farmer's Convention — "situated right on the farm where the plats can be seen and where all kinds of farm implements may be displayed."



The cornerstone for Morgan Hall was laid November 1, 1919. President Morgan's son, Harcourt, Jr., laid the stone with a trowel made of iron and wood from Old College, which had been torn down to make room for Ayres Hall.

honor of former university trustee, O.P. Temple. The building was dedicated May 22, 1912, by Prof. Andrew Soule, who returned to UT for the occasion. Judge Temple's daughter, Mary Boyce Temple, gave the convention $1,000 for the building. As far as is known, this was the only building on the entire campus built with private funds up to that time.

This pavilion, located to the east of Morgan Hall, was a two-story building 86 by 107 feet. In addition to the main convention hall — which seated about 800 — and a large judging pavilion, it provided stalls for exhibit animals as well as rooms for sectional meetings. The large high stage was well suited for speakers and for entertainers. The brick for the building was hauled several miles by horse-drawn wagons. The building was also used for many years by the animal husbandry department to house animals for class demonstrations and student livestock judging.

Temple Hall was the site of the "Ag Roundup," sponsored for many years by the Agricultural Club. It was torn down circa 1958 to provide parking space. The arena in Brehm Hall replaced Temple Hall as a place for the judging of livestock by students and for farmer functions.

MORGAN HALL

A great step in the history of the university occurred in 1917, when the legislature voted the first $1,000,000 bond issue for a building program. H.A. Morgan deserves most of the credit for obtaining this appropriation; however, many alumni groups under the leadership of L.R. Neel, as secretary of the Alumni Association, influenced legislators to support this bond issue.(13)

A large portion of this money was allotted for a classroom building on the "hill" and for an armory. Because of inflationary prices of construction in 1917, the funds were held in reserve. Later they were used to build Ayres Hall, and the rest was used for a classroom and laboratory building on the agricultural campus instead of constructing an armory. The UT Cooperative Creamery and the Old Club House were torn down to make room, and the cornerstone for the first major building for classrooms and laboratories on the agricultural campus was laid on November 1, 1919. President Morgan's young son, Harcourt, Jr., laid the stone with a trowel made of iron and wood from Old College, which had been torn down to make room for Ayres Hall.

Items placed in a box inside the corner stone included: a *University Register*, a copy of the *Orange and White* — the student newspaper, a copy of the *U.T. Farmer* magazine, a list of members of the East Tennessee Farmers' Convention, pictures of Dr. Ayres and Dr. Morgan, a copy of the appropriation bill for the building fund, pictures of the Club House and other buildings previously on the site, a list of officers and members of the Agricultural Club, and a history of the trowel used in laying the cornerstone.

The president of the Agricultural Club acted as master of ceremonies and gave a short talk. President Morgan gave an address on the importance of and uses to be made of the building.(15)

The building, first called Agricultural Hall, was completed in 1921 at a cost of about $265,000. An attempt was made at the time of completion to name the building for Dr. H.A. Morgan. Always modest, he would not approve of the name. The building was dedicated in a ceremony in the spring of 1921. Dr. W.O. Thompson, president of Ohio State University, gave the dedicatory address. In his comments he said, "...I congratulate Tennessee on this splendid institution that had its beginning with Carrick (the first president) and Blount (the first territorial governor) and now entering a new era with President Morgan."

Hon. T.A. Wright, head of the building committee of the board of trustees, presented the building. Dr. Morgan reviewed the conditions leading up to its construction and Prof. Keffer, director of Extension, accepted the building for the university and state. Ayres Hall was dedicated the afternoon of the next day.(15)

Agricultural Hall was renamed Morgan Hall and dedicated again on November 13, 1937. Dr. Frank McVey, president of the University of Kentucky, gave the dedicatory address. Included in his comments were these words:

> *"...This is a day of thought and purpose, because you have chosen to name this building after a man who has served well the people of his state. That cannot be lightly thrown aside, because you have taken to yourself the name of the man through*

whom you shall try to bring that same spirit to bear upon the problems of the people. An honor to the man? Yes, and nobly given! But an obligation not to be assumed lightly. I think it will be joy to him for whom it is named to know that the spirit will also be presented in the work that comes from this building that we call Morgan Hall."

Included in Dr. Morgan's response at a homecoming dinner on November 12, the night before the dedication, were these thoughts:

"...Your generosity will pardon my assertion that receiving of honors at the hands of friends is the major embarrassment of this occasion. The work I have endeavored to do has been its own exceeding great reward. The privilege of giving labor to aid men and women to secure those larger blessings of life which they were not able to achieve for themselves alone has yielded a satisfaction which has left me without desire for other awards."

This statement was typical of the modesty of Dr. Morgan and his desire to serve and improve the lot of the people of Tennessee and the South.

Some academic buildings add dignity to a campus; Morgan Hall has certainly added dignity to the agricultural campus. It has been home for many departments and activities over the years including the teaching departments of agricultural education, agricultural economics, agricultural engineering, agronomy, dairying, entomology, horticulture and plant pathology. The building has also housed the agricultural library, the offices of the Experiment Station, the Extension Service and the business office. On the walls of the first floor hang plaques dedicated to the people and organizations that have been elected to the Agricultural Hall of Fame.

A large auditorium was located on the second floor in the space now occupied by the business office. This large room was not only used for classes for many years , but served as the agriculture campus auditorium before those in Ellington and Brehm Halls were constructed. The first "Barnwarmin'" events were held there. Some alumni may remember a mounted moose head that hung at the rear of this room, a trophy from Morgan's native Canada.

During his years as dean and president, Dr. Morgan lived in a house on the hill between Morgan Hall and Kingston Pike. He continued to live there with his family throughout his years with TVA. When the situation was questioned, a trustee commented that the university could not repay its debt to Dr. Morgan for his services and that he should be allowed to live there as long as he desired.(16)

In 1885, the board had rejected a recommendation that a home be provided on the farm for the professor of agriculture because of his duties both on the "Hill" and the farm.

The dairy department, including the creamery, was housed on the first floor of Morgan Hall from 1921 until the completion of McCord Hall in 1949 and the current dairy products building in 1950. Many alumni recall with fondness the tiny lunchroom that operated adjacent to the creamery on the south wing of the first floor of Morgan Hall for the convenience of the students and faculty.

Following World War II a temporary, barracks type building was constructed to the west of Morgan Hall for greatly needed classrooms. The lower floor of this building was used by the department for a much larger lunch room until a new one was provided in McCord Hall.

A new dairy barn was completed on Cherokee Farm in 1936. It was described as having perhaps "the greatest use of electricity in a dairy barn in the whole country." Some eleven major jobs were accomplished by electricity. That year a second new modern barn was built on Cherokee Farm in addition to a complete poultry unit and a central hog house.

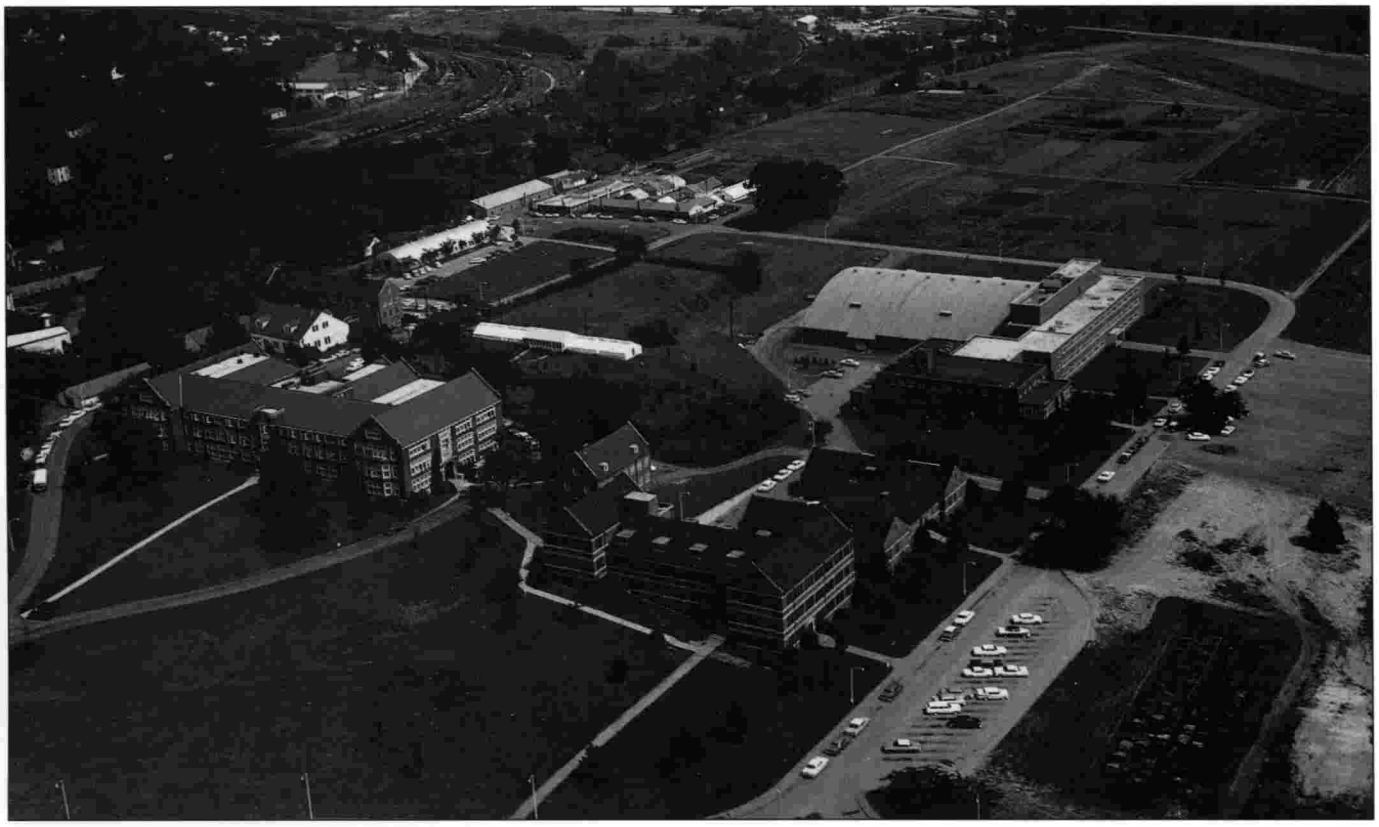
AGRICULTURAL ENGINEERING

Agricultural engineering was taught on the main campus for many years, even after other departments had relocated to the ag campus. This location was inconvenient for students and the facilities were inadequate. In order that the unsatisfactory conditions might be remedied to some extent, a three story abandoned dairy barn, constructed in 1899 on the University Farm, was remodeled during the summer and fall of 1936 for an agricultural engineering building.

This facility, commonly called the Old Ag Engineering Building, provided shops and laboratories until the "new" Agricultural Engineering Building, now the department office complex, was constructed in 1939-41 through the WPA Federal labor program. Faculty offices were located in Agricultural Hall (Morgan Hall) before the new building was constructed. The newest classroom and laboratory building was completed in 1981 at a cost of $3,300,000. The Old Agricultural Engineering Building was used until 1981, when it was torn down. The area is now a parking lot.

DAIRY BUILDINGS

McCord Hall, named for Governor Jim McCord, a long time friend of the dairy industry who assisted in obtaining building funds, was constructed in 1949. It not only housed the dairy department but also the poultry department, the animal husbandry department for a time, and a lunch room. The Dairy Products Building was built the same year. McLeod Hall, the food technology building, was completed in 1951 at a cost of $600,000. During 1973-1975 some of the food tech-



In 1961, much of the Ag Campus was still tilled for research. (clockwise from lower left corner) Morgan Hall, Old Ag Engineering Building (a 19th century barn), Ag Engineering Building, research buildings including the Plant Sciences Annex and greenhouses, the Indian Mound (with trees on top), Brehm Animal Science, McLeod Hall, the Dairy Products Building, McCord Hall, and the Corn and Cotton Building. The long white building near the center was the college greenhouse. Ellington Plant Sciences was begun five years later.

nology personnel occupied McCord Hall and some sections of buildings on the main campus while McLeod Hall, was being remodeled. Upon completion of McLeod Hall in 1975, about half of the faculty moved to this building. The other food technology faculty remained in McCord Hall.

BREHM HALL

The animal husbandry department was housed first in Morgan Hall and then in McCord Hall. The overcrowded conditions of the latter led to the preliminary planning for another new building. In the mid 1950s, a committee consisting of Dr. Charles Hobbs, head of animal husbandry; Dr. John Ewing, director of the Experiment Station; Dr. O.E. Goff, head of the poultry department; and Newt Odum, farm superintendent, was appointed by UT President C.E. Brehm to help plan a new facility.

Funds were made available by the state in 1957 and a new building was completed in 1958 at a cost of about $1,300,000. It was named Brehm Hall in honor of the president and former dean of the college. In addition to classrooms, offices and laboratories, the building has a large demonstration-lecture room which seats 235. This room is unique in the fact that animal carcasses can be rolled into the room from the cooling rooms on an overhead track for students and others to observe and study. The building is connected to McLeod Hall, the food technology building, which is convenient for faculty and students.

The arena portion of Brehm Hall seats about 2,000 and is designed for the show and sale of livestock. The stalls in the building are convenient for housing animals for class use and for shows and sales. It was appropriate that the first use of the arena was for the J.B. Madden Memorial Livestock Judging Contest, a long-time student event.

ELLINGTON PLANT SCIENCE

A plant science building was completed in 1968 to relieve the overcrowded conditions in Morgan Hall. The cost of this building was about $2,250,000. This was perhaps the first building for which the faculty had significant input in advising the architect on the needs of the departments. Several committees were active in assessing the requirements and developing plans under the general guidance of Dr.

Lloyd Seatz, head of the department of agronomy.

The ground floor was planned for lecture rooms, laboratories, and a large auditorium. The second floor was assigned to ornamental horticulture, agricultural biology, and forestry. The third floor was assigned to the department of agronomy.

GREENHOUSES

The college greenhouse was constructed in 1936 and occupied an area south of Morgan Hall. It served the horticulture teaching program for many years. Many students who worked in the greenhouse were housed in a wing of the building. It was removed after Ellington Plant Sciences Building was completed. Many greenhouses have been constructed on the Ag Campus in recent years. In 1990, houses for both teaching and research for all plant science departments were constructed at a cost of $350,000.

Buildings located between Ellington and the greenhouses, called the Plant Sciences Annex, have served the plant science departments as offices for graduate students and working areas.

THE LIBRARY

Prof. Hunter Nicholson, the first professor of agriculture and horticulture, became the university librarian in 1877, and served again between 1883 and 1886. Charles S. Plumb, chairman of agriculture, served as the university librarian from 1888 to 1890.

The first library in the School of Agriculture, Horticulture and Botany was established in 1880. In 1890, the Agricultural Experiment Station library had about 2,500 volumes — about half that of the university library. They were available to students as well as Experiment Station personnel.

The 1891 annual report was the first to mention an agricultural librarian, Miss E.E. Morris. C.E. Chambliss followed from 1892 to 1894, and Charles H. White is listed in 1885. In 1896, Frederick H. Broome was appointed librarian. He served in this position from 1896 to 1905 and from 1906 to 1919. During this period, and for many years after, Broome also served as secretary to the Experiment Station. He served the University of Tennessee a total of 52 years. The agricultural library was re-catalogued into the Dewey classification system in 1905. At that time the library had 2,874 volumes.

During most of the early history of the agricultural library, there were really two separate libraries: an Experiment Station Library, which was supported with federal funds, and the Agricultural Library, which was funded by the university. The two libraries were always housed together and were available for use by all faculty and students. In 1921, the year the College of Agriculture moved into Agricultural Hall (now Morgan Hall), the University Library assumed operation of the Experiment Station collection, although it was kept separately from the college collection. With new equipment, the library was increasingly used for study by students as well as for reference purposes.

Several persons served as agricultural librarian between 1919 and 1931. In 1931 Sarah Currell transferred from the engineering library to the agricultural library and faithfully served until 1954. She was said to be especially helpful to students and faculty during her many years of service. One out-of-state librarian noted that Currell had the best-organized agricultural library in the East.

Other librarians have made significant contributions to the growth and use of the agricultural library. These include Aubrey Mitchell from 1964 to 1981, and Don Jett beginning in 1981. Many assistants have given notable service as well, including Betty Adams for more than 10 years and Jean Taylor for more than 32 years.

The college library has been housed in five buildings: first in the old Morrill Hall, in Science Hall, in the new Morrill Hall, and in two locations in Morgan Hall. The latest location is the Agriculture-Veterinary Medicine Library, located in the Veterinary Teaching Hospital building on the agricultural campus. This facility was dedicated and named for Dr. Webster Pendergrass in 1984 and is a branch of the UT library system.

This branch holds over 90,000 volumes, plus many serials, Experiment Station and Extension bulletins, and publications relating to disciplines included in the College of Agricultural Sciences and Natural Resources. Study areas are sufficient to accommodate about 200 people. Computer terminals are available for on-line library and data base searches. Many of the needs of students are met by this branch of the library. Adequate space is available for placing materials needed for departmental courses on reserve. The Hodges Library on the main campus is an additional source of information and has large study areas.

The UT Board of Trustees has authorized free, inter-campus transportation for students taking courses on the Ag campus. This will remove the students' problem of private transportation or hitch-hiking between the two campuses, announced Dean Peacock. Ag and Home Ec students are issued passes that can be used on a special Knoxville Transit Co. bus operating between Morgan Hall and the Home Economics Building. The bus leaves main campus on the half-hour and leaves Morgan Hall at a quarter-of-the-hour.

— Tennessee Farmer, 1947

The World's Fair has not been the parking problem that we anticipated, and we hope that our alumni and off-campus staff won't be hesitant about visiting us this summer...

— Fletcher Luck, director of services, 1982

CAMPUS TRANSPORTATION

The distance separating the agricultural campus from the main campus has always caused problems with class schedules and transportation for students. Before the days most students could afford cars, many had to walk, hitchhike, or ride the street car between campuses. There have been discussions about building an overpass over streets and the railroad to shorten the distance between the two areas, but cost has prevented this solution. Beginning in 1947, free buses — first school buses, then Knoxville City buses — have made regularly scheduled runs between the campuses for the use of students and faculty.

TENNESSEE RIVER BRIDGES

Bridges across the Tennessee River and Lake Loudon have played an important role in the life of the college. When the highway department opened up the "Buck" Karnes Bridge across the river between the agricultural campus and the Cherokee Farm in 1929, the old bridge down the river was left intact. This was during the depression and apparently no one wanted it even for the scrap metal. The old bridge was used by some student groups to make the freshmen count the planks. Every missed plank equaled a lick.(17) The bridge was also a favorite place for night observation of the river and the moon by courting couples. Eventually, the university found funds to remove the bridge. Portions of the old bridge can still be seen.

For several years following completion of the new Karnes Bridge in 1929, parking on the side lanes by couples was a favorite pastime. At that time Alcoa Highway was a gravel road with little traffic. However, it was an important link to Cherokee Farm for student classes in dairying, animal husbandry, horticulture, and forestry, and for student workers at the farm. It is not easy to imagine, with the new bridge completed in 1991 and the heavy traffic, that parking on the bridge would be possible as late as the 1940s.

Tennessee Farmer, 1937

Try Them – Compare Them...

Our Products Speak For Themselves

Ask for our line of

- COTTAGE CHEESE
- CHEESE
- ICE CREAM
- MILK
- BUTTER

On sale at the Creamery and on the Main Campus

The U.T. Creamery

Knoxville, Tennessee

REFERENCES

1. John R. Montgomery, Stanley J. Folmsbee and Lee S. Greene. *To Foster Knowledge 1794-1970*. The University of Tennessee Press, 1984.
2. *The University of Tennessee Farmer*, Vol. XXX, No.1, 1936.
3. John R. Montgomery. "The Volunteer State Forges Its University. The University of Tennessee, 1887-1919." *The University Record,* Vol. 69, No. 6, November 1966.
4. *The Tennessee Alumnus,* 1934.
5. See No. 3.
6. *The Tennessee Alumnus,* July 1922.
7. John R. Montgomery. "Threshold of a New Day." *The University of Tennessee Record*, Vol. 71, No. 6, 1971.
8. *The University Record,* 1905.
9. Stanley J. Formsbee. "Tennessee Establishes a State University. 1879-1887." *The University Record,* Vol. 64, No. 3, 1961.
10. *The University Register,* 1897.
11. *The University Record,* 1905.
12. *The University Record,* 1900.
13. *The Tennessee Alumnus,* 1917.
14. John R. Montgomery. "The Volunteer State Forges Its University, The University of Tennessee, 1887-1919." *The University of Tennessee Record,* Vol. 69, No. 6, November 1966.
15. John R. Montgomery. "Threshold of a New Day, The University of Tennessee, 1919-1946." *University of Tennessee Record*, Vol. 71, No. 6, 1971.
16. *The University of Tennessee Record,* Vol. 10, No. 3, May 1905.
17. Stanley J. Folmsbee. "Tennessee Establishes a State University, 1879 - 1887." *University Record.* Vol. 64 No. 3, 1961.
18. *The University of Tennessee Record,* Vol. 10, No. 2, April 1905.
19. *The University of Tennessee Record.* Vol. 6, No. 2 May 1900.

CHAPTER IV

GIFTS, LOANS, SCHOLARSHIPS & OTHER FINANCIAL AID

During the long history of the college, many students have needed financial assistance to continue their education. Fortunately, through most of the period, help has been available. Financial aid has allowed many students to attend the university that otherwise might attend other schools or not at all. In 1993 the cost per year at the university was approximately $8,000 with the cost increasing each year.(1)

Aid for students has come through government programs, from donors including industries, businesses and other organizations, and from endowments and trusts established by individuals or families. Important funds have also come from annual giving by thousands of friends and faculty. Monies have been available either as work-study opportunities or as loans or scholarships.

Many students borrow money in order to obtain an education. One survey in 1993 indicated that the average undergraduate owes almost $8,000 upon graduation, and those obtaining an advanced degree often owe more than $30,000. Some use credit cards to pay part of their expenses. Many are still in debt several years after graduation.

WORK-STUDY PROGRAMS

Although students have had opportunities to work off campus, the college has provided jobs for many students in need of financial help. As early as 1870, agricultural apprenticeships were established for students to work on the newly purchased farm. The pay was six to eight cents per hour. Departments have offered hourly jobs to needy students. Positions were almost always available in the creamery, the dairy, on the experimental plots, in research laboratories, and as teachers' assistants.

During the depression of the 1930s, the federal government established the National Youth Administration (NYA) to financially assist students. Many ag students were able to stay in school with the help of this program, even though the pay was only 20 to 25 cents per hour. Students in the NYA program worked at various jobs for the faculty.

Yearly Expenses at UT

Maintenance fee	$159
Room rent and board	$500
Books and supplies	$50
Laundry, dry cleaning, etc.	$60
TOTAL	**$769**

Fees listed are for in-state students. Student workers earn 60 to 75 cents per hour. UT has several scholarships and loan funds available for students.

— Tennessee Farmer, 1957

The Farm Management Office of the Agricultural Extension Service used student workers on the NYA payment program to analyze farm business reports. They determined the most profitable farm systems under the Agricultural Adjustment Administration (AAA). About 1935, the Extension Service and Tennessee Valley Authority (TVA) signed a contract to encourage farmers to use high analysis fertilizers developed by TVA. Farmers who used these fertilizers were required to send in records for analysis. Many students were paid to study them. Their payment came through both the NYA and the Works Progress Administration (WPA). There are many examples of the assistance given to the university and to students during the depression.

EARLY FINANCIAL AID

The Morrill Act included a provision that allowed each senator to nominate two students and each representative three students from their district to receive free tuition at the university. The order of preference for selecting students for free tuition was, "first, to the children of deceased federal soldiers; second, to children of those who lost their lives on account of their loyalty; and third to those who excel in public schools."(2) This was partially to reward East Tennessee for its loyalty to the Union during the Civil War. The legislature at the time was dominated by East Tennessee Unionists.

Free tuition for many students was standard policy for years. The number of state students receiving free tuition varied from 25 in 1869-70 to 211 in 1873-74 and totaled more than 1,300 between 1869-1879.(3) In 1888, the legislature set a limit of 275. The State Tuition Scholarships included free railway transportation to and from the students' homes. The free tuition policy greatly reduced income for the school and added to its financial problems for many years.

In the late 1800s, faculty and the Alumni Association gave scholarships to students with superior academic records. The number of these were very limited, and few agricultural students benefited from the program.

In 1912, Southern Railway established a $300 scholarship for one agricultural student who lived on or near a rail line in each of the three divisions of the state. After four years these were changed to loan funds. More than $3,000 of this donation is still available for students.(4)

One of the largest early bequests to the university was provided in the will of Benjamin Rush Strong, a wealthy philanthropist and financier. Although the family contested the will, which gave most of his property to the university, the total finally received in 1919 was about $208,000. The will established the Rush Strong Students' Aid Fund and specifically included loan funds for agriculture and home economics students. Thousands of students have taken advantage of this fund and, although the interest rate was low, the fund had grown to $464,000 by 1962 and to $800,000 by 1993.(5)

Very few scholarships were available until the early 1950s. A Sears Foundation Scholarship awarded a modest $100 per year to incoming ag majors beginning in 1939. The oldest scholarship still available was established in 1949 by the Tennessee Federation of Garden Clubs and Tennessee Nurserymen's Association. This award, called the Tennessee Federation of Garden Clubs Scholarship, goes to a junior horticulture major who has exhibited leadership ability, good character, and professional interest. Two annual awards of $700 each were available in the early 1990s. Since 1949, students have received about $30,000 from this fund.

MODERN SCHOLARSHIP PROGRAMS

During the academic year 1952-53 there were only seven scholarship funds available, with 25 awards totaling $5,800. Ten years later, the number and value had about doubled.

In 1964, Dr. Webster Pendergrass, dean of the college, hired E.J. Chapman to develop a stronger scholarship program and to recruit students. Having served on the staff at the West Tennessee Experiment Station and as Superintendent of the Middle Tennessee Station, Chapman was well acquainted with many influential agricultural leaders in the state.(6) Organizations, alumni, and friends responded to Chapman's call for financial help for students and, in turn, enrollment began to increase. Based on the foundation laid by Chapman, the total endowment for the College of Agricultural Sciences and Natural Resources for scholarships, faculty awards, and other uses exceeded $5,000,000 by about 1992.

By the academic year 1972-73, the number of scholarship funds had increased to 70 with 185 students receiving awards averaging $325 for a total of $60,000. In 1992-93 there were 102 funds and 417 awards averaging $800 for a total of $340,000. By 1993, more than $4,000,000 in scholarships had been given since the program began.

PRIME SCHOLARSHIPS

The generosity of some donors has resulted in scholarships of either a relatively large amount of money each year or for multiple years. In 1992-93 there were five, four-year scholarships and six scholarships with the annual award for each exceeding $5,000. Recipients of these special awards are students with a high standardized test score and superior high school academic performance. They have demonstrated leadership ability, good character, and a financial need. They must enroll in the College of Agricultural Sciences and Natural Resources and have career plans in a field of agriculture.

The largest student endowment is the Arch E. McClanahan Memorial Scholarship Fund. McClanahan, a Davidson County dairy farmer and breeder of Jersey cattle, gave a lifetime of service and leadership to Tennessee agriculture. He set up a fund in 1987 to help financially support the education of young people with an interest in agriculture. This endowment of $1,599,125 provides 24 $12,000, four-year scholarships and attracts some of the brightest and most talented students to UT and to the College of Agricultural Sciences and Natural Resources. The first McClanahan scholarships were awarded in 1990.(7)

Jack H. Wright, a World War II and TVA pilot, had a great love of agriculture. The Jack and Dorothy Wright Endowment of $118,792 was given to establish the Jack Wright Memorial Scholarship. Dorothy Wright established additional

life income trusts to increase the value of the endowment. Awards of $1,200 are made from this fund each year and are renewable for three years based on academic performance.

The Tennessee Farm Bureau has long been a supporter of the scholarship program. In 1989, it funded an endowment that provides eight $2,000 scholarships each year. They go to two students in each undergraduate class with exceptional leadership ability and whose parents are full-time farmers and members of the Tennessee Farm Bureau. Recipients must attend the college's leadership seminar and participate in some Farm Bureau-sponsored programs.

Early in the development of the scholarship program, a fund was established to include donations, usually from annual giving, from alumni, friends and faculty who had not designated their gifts for a specific group. Agricultural Faculty and Alumni Scholarships are awarded for one year but may be renewed if the student remains in good academic standing. These scholarships range from $600 to $2,000 each year and are awarded to 65 to 75 students.

The Rehabilitation Corporation of Tennessee has aided the scholarship program for many years. It funds 60 $650 undergraduate awards and five $1,200 awards for one year. They may be renewed if satisfactory grades are maintained. Recipients must be residents of Tennessee.(8)

In 1967, Tom Hitch, past Tennessee Farm Bureau president and Williamson County farmer, made a charitable remainder trust to the university to establish the Tom and Mae Hitch Agricultural Endowment Fund. A portion of the earnings from the fund provides four or five $600 to $1000 one-year scholarships for deserving rural Tennessee students.

About 1981, ag alumnus and Clinton businessman Howard Wilkerson began generous annual contributions to establish the Howard and Ruby Wilkerson Endowment which provides need-based scholarships in traditional agricultural majors such as plant and animal sciences.

SPECIAL SCHOLARSHIPS

Some scholarships are specified for students majoring in certain departments or for other designated groups. One of these is a scholarship in animal science given by Hal and Alma Reagan in 1977. It became available in 1987. This fund is one of the largest ever received by the university and supports a number of other programs.

Elizabeth Rhea Fair, a UT graduate, honored her brother, Dr. John R. Fain, a leader in agricultural education in the South, by providing an endowment in her will. Six to eight annual scholarships are awarded to students from Jefferson County. Recipients may receive more than one award if they continue to perform well academically.

A leading naturalist painter, Guy Coheleach, donated 500 black bear prints to the university in 1977 and has donated other prints since. Funds from the sale of these prints are used for four or five $1,000 annual awards for undergraduate or graduate students in the Department of Forestry, Wildlife and Fisheries. These are based on leadership qualities and academic records.



Grover and Bromma Pemberton look over a surveyor's map of the farm they gave to UT in 1980. Bob Pentecost (right) worked with the couple in making their gift.

Philip Morris USA established scholarships in 1982 to encourage students from tobacco-growing regions of the state who were majoring in Agricultural and Extension Education to continue their education and return to their home areas. Each year, five to eight $600 to $1,000 annual awards are made, and two are renewable depending upon the academic performance of the students.

To encourage more African-American students to enroll in the college, eligible freshmen or transfer students may receive a scholarship of at least $1000 from the general scholarship funds. These awards are renewable for other years provided the student maintains a 2.0 point grade point average and make progress toward a degree.

SCHOLARSHIP ADMINISTRATION

The present administration of the scholarship program was established in 1984 by Dr. W. W. Armistead. The Office of Agricultural Development was placed in charge of obtaining endowments and large grants. General supervision of the scholarship program is handled by the office of the dean of the College of Agricultural Sciences and Natural Resources and by the associate dean.

Beginning in the 1960s when the number of scholarships and applicants greatly increased, it became necessary for a faculty committee to select recipients. A committee of three, with one acting as chairman, usually serves for several years. Those who have served include professors David L. Coffey, Ronald L. Hay, Frank B. Masincupp, John J. McDow, Curtis C. Melton, Monty J. Montgomery, Curtis H. Shelton,

Maxwell E. Springer, and Horace C. Smith. (9)

As the amount of funds, number of applicants, and number of reports increased, use of a computer data base became necessary. In 1987, Dr. Luther R. Wilhelm assisted Dr. John McDow, the committee chairman, in putting scholarship management on a data base to make the committee's work more effective. (10)

AWARDS PROGRAM AND BANQUET

In the 1950s, Dr. Neal D. Peacock, dean of resident instruction, established an annual spring banquet to recognize scholarship recipients and students receiving other honors. He personally paid for meal tickets for the first three banquets because he couldn't get approval to use money from his budget. This event was later sponsored by the student-faculty council and grew to the extent that attendance exceeded 300, including faculty, retirees, and administrators in addition to scholarship winners. Outstanding teachers, graduate assistants, and outstanding students are recognized at the banquet. In recent years, a donor has financed this event, now called the Scholarship and Awards Recognition Program and Banquet.(11)

OTHER ENDOWMENTS AND GIFTS

Mary Boyce Temple gave $25,000 for the establishment of the Oliver Perry Temple Foundation in honor of her father, who was a long-time trustee and strong supporter of the university's early agricultural teaching program.(12) This gift was apparently the first large gift given to the university by a citizen of the state. The money was used to purchase and breed purebred animals and to improve plant breeding. This not only assisted the research program, but was a valuable contribution to the teaching programs in the first classes in the department of agriculture.

Some recent endowments have been made to the Institute of Agriculture, a portion of which can be used for faculty awards. The B. Ray Thompson Endowment of $1,000,000 is used to fund several programs in the college, including faculty awards, graduate student awards and stipends, and for purchasing teaching equipment. The first faculty award from this endowment was made in 1990 and is discussed in the chapter on faculty honors. The primary departmental beneficiaries of stipends are Agricultural Engineering, Entomology and Plant Pathology, and Plant and Soil Science.

William F. (Red) Moss, former extension agent and Tennessee commissioner of agriculture, has given money to create several endowments which support activities in the college. These include funds for the library, faculty teaching awards, research idea grants, and the costs of the annual awards banquets of both the Colleges of Agricultural Sciences and Natural Resources and Veterinary Medicine.

In 1966, a life income agreement was entered into by William Simpson Overton and his wife Kathryn, long-time supporters of university agricultural programs. A fund of $115,722 was made available to the college and placed in a quasi-endowment with the income to be used for a W.S. Overton Distinguished Professorship in Agriculture and a W.S. Overton College Merit Award. The first awards were made in 1991 and the winners are listed in the chapter on faculty honors.

TEACHING AND LEARNING FUNDS

In recent years, a number of funds have become available from endowments to assist the faculty in projects to improve undergraduate programs. In 1985, Dr. Neal D. Peacock, former head of the department of horticulture and dean of the College of Agriculture, and his wife established the Neal and Tacie Peacock Endowment Fund. This fund remains open for future gifts by family and friends. The income is used to encourage the teaching faculty to plan and implement new and innovative teaching procedures and to improve evaluation of student learning in undergraduate courses. The fund can also be used to motivate and guide students to a higher level of understanding, communication and reasoning skills.

The dean of the college plans and supervises the use of the Peacock funds with the advice of the student-faculty council or a committee selected by the council. Proposals for projects or activities can be submitted by any teaching faculty or undergraduate in the college. Awards from this endowment include the design and building of a model for visualizing pollution and erosion problems associated with agriculture by a teacher in plant and soil science. An instructor in ornamental horticulture and landscape design used his award to improve student landscape design projects by critiquing their work on audio tapes.(13) Monies through the dean's office are also available from endowments for faculty development and enhancement, including participation in seminars and workshops.

The Emory River Land Company gave $100,000 for an endowment to support various student and faculty activities in the department of Forestry, Wildlife and Fisheries.

The largest alumni-supported endowment in the college is one honoring Ed Lidvall and William Cole, professors of animal science and leaders in livestock and meats judging, respectively. This judging fund has a value in excess of $100,000. The income is used to support livestock and meats judging teams.

The Tom Hitch Endowment of more than $80,000 supports annual seminars to increase the knowledge of both

SCHOLARSHIP AWARDS 1953-1993

COLLEGE OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES

Academic Year	No. of Funds	No. of Awards	Total Funds Awarded	Average Value	Range of Award Values
1952-53	7	23	5,800	232	150 - 400
1953-54	7	16	4,000	269	200 - 400
1954-55	8	18	4,600	256	150 - 400
1955-56	11	24	5,650	235	100 - 500
1956-57	13	27	6,150	228	100 - 500
1957-58	14	30	6,150	256	100 - 500
1958-59	17	30	7,250	242	100 - 500
1959-60	17	41	10,700	261	100 - 500
1960-61	16	42	11,100	264	100 - 500
1961-62	13	36	10,650	296	100 - 500
1962-63	16	40	12,000	300	100 - 500
1963-64	14	40	10,750	269	100 - 500
1964-65	22	51	13,450	264	100 - 500
1965-66	41	102	23,500	230	100 - 500
1966-67	67	148	36,500	247	100 - 500
1967-68	80	184	44,350	241	100 - 500
1968-69	73	194	46,190	238	100 - 500
1969-70	74	192	58,450	304	100 - 600
1970-71	63	186	52,600	283	100 - 600
1971-72	67	203	64,250	317	100 - 500
1972-73	70	185	60,275	326	100 - 500
1973-74	53	200	72,951	365	100 - 500
1974-75	81	222	84,810	382	100 - 800
1975-76	67	248	95,290	384	100 - 600
1976-77	80	242	94,785	392	200 - 650
1977-78	75	237	93,542	395	200 - 650
1978-79	58	197	86,894	441	250 - 650
1979-80	70	249	112,025	450	250 - 650
1980-81	71	235	114,192	486	250 - 750
1981-82	77	260	126,485	487	300 - 750
1982-83	61	253	131,384	519	300 - 1,000
1983-84	69	290	165,311	570	300 - 1,200
1984-85	71	360	191,968	533	300 - 1,200
1985-86	66	324	182,148	562	300 - 1,200
1986-87	77	283	178,510	631	300 - 1,200
1987-88	83	342	203,498	595	300 - 2,500
1988-89	85	328	232,764	710	300 - 2,500
1989-90	101	368	275,604	749	300 - 2,500
1990-91	105	423	376,458	890	300 - 3,000
1991-92	102	403	356,050	884	300 - 3,000
1992-93	102	417	340,493	817	300 - 3,000

Adapted from A History of Scholarships in the College of Agricultural Sciences and Natural Resources by John J. McDow, 1993

Before 1952, scholarships were low in funds, number, and value.

students and faculty in the animal sciences. There are also several scholarships of lesser value, but totaling more than $25,000, available only to majors in animal science.

Mr. Buford Irwin, a long-time friend of the university, established a fund of $600,000 to support various areas of the Institute of Agriculture, including the teaching program. The Harley and Juanita Irwin Trust of $450,000 supplies funds for various uses for the Institute.

CHAIRS OF EXCELLENCE

The Ivan Racheff Endowment of more than $500,000 created a Chair of Excellence in the Ornamental Horticulture and Landscape Design Department. Although primarily in research, the faculty are expected to have a great influence on the quality of education of graduate students in several departments. A Blasingame Chair of Excellence in Agricultural Policy was established in the Department of Agricultural Economics in 1990. Although the goals of this chair are also research oriented, it makes a significant contribution to the teaching of graduate students.

REFERENCES

1. Sharon Littlepage, "A Wise Decision." *UT Agriculture*, Spring 1992.
2. Appendix A, *An Act to Establish the Tennessee Agriculture College*, January 1869.
3. *University Register and Catalog*, 1879.
4. John J. McDow, *A History of Scholarships in the College of Agricultural Sciences and Natural Resources at The University of Tennessee, Knoxville*, 1993.
5. *University Record,* 1908. Vol 11, No. 3, May 1908.
6. See No. 4.
7. *Arch E. McClanahan Scholar Program*. (Brochures, 1987, 1989). The University of Tennessee, Knoxville, College of Agriculture.
8. *Scholarship and Awards Programs and Banquet*. The University of Tennessee, College of Agricultural Sciences and Natural Resources, 1992.
9. See No. 4.
10. John J. McDow, Luther Wilhelm and Linda L. Johnson. *Management of a College-Based Scholarship Program*. Paper presented at the ASAE 1990 International Winter Meeting, 1990.
11. See No. 8.
12. *The University of Tennessee Record*, Vol. 34, No. 3, 1930.
13. Angela McGhee, "Faculty Says No to Status Quo." *UT Agriculture*. Winter 1993.

CHAPTER V

STUDENT HONORS AND ACTIVITIES

Student organizations on the agricultural campus have played a significant role in the life of most alumni. They have not only been important in leadership training, but have also supplemented formal courses in the education of hundreds of students through club activities such as judging teams, publications, and community and philanthropic activities.

Most alumni believe that college-sponsored extracurricular activities are an important part of the university experience. In fact, of those having an opinion on the subject in a 1990 survey, 582 out of 622 — or about 93 percent — believed such activities were important in their total educational experience.(1)

EARLY CLUBS

The first report of a college-wide agricultural student organization was when a "Lager" or "Budweiser" club was formed in 1899, according to Knoxville newspapers. The main purpose was to get a picture of the group in the *Volunteer*, the student yearbook. Club membership was limited to students who lived in the dormitories on the farm.

Another club was formed the following year. The Farmers' Club had as its objective the "Promulgation and Preservation of Pastoral Patriotism." Candidates for membership must have - "handl'd a hoe, rock'd a cradle, pull'd a bell cord and raised cane." The flower of the club was corn flower, its color, grass green, and its motto, "hoe out your row." Their yell was "Go to bed sun-down -Rise' fore day -, Watermelon! Pumpkin! - Gee! Haw! Yea-a-a ! ."(2)

In 1900 the Rural Science Club was formed as a more serious agricultural student organization. In 1903 the Farmers' Club combined with this group and a new flower, "Egg Plant," was chosen. A new yell was added: "Rah, rah, rah! Rah, rah, rah! Gee, Woe, Haw! Tennessee!" The officers of the club had unusual and somewhat appropriate titles including: Teamster, Gardener, Keeper of the Swine, Herdsman, Shepherd, Veterinarian, and Waterboy. In 1904 this club had 17 members.

"Agriculture!
Horticulture!
Hayseed, Haw!
Tennessee! Tennessee!
S-a-w cow! Saw!"
— Ag Club Yell, early 1900s

THE AG CLUB

The Agricultural Club was founded in 1906.(3) A requirement for membership was that "one must have handled the hoe, sowed his wild oats, and raised cane." A more recent yell of the club was: "Agriculture! Horticulture! Hayseed, Haw! Tennessee! Tennessee! S-A-W COW SAW!" The Ag Club became one the strongest organizations on campus and served the students well for more than half a century.

The club had as its lofty aim "to stimulate greater interest in agricultural subjects and to more intimately and effectively unite the students of agriculture." Lake Ross Neal served as the group's first president. The 25 members consisted of 4 seniors, 9 sophomores and 12 freshmen.

In 1916 the Ag Club invited women in home economics

to become associate members, and they accepted. The addition to the curriculum of a country life course for women was probably the reason for the invitation. However, the next year a Home Economics Club was organized. For many years the two clubs held joint socials and the ladies assisted the Agricultural Club in many projects.

Sometime in the 1930s, the Agricultural Club was incorporated and received a charter from the state. Faculty members listed in the charter were: M. Jacob, N.D. Peacock, N.E. Fitzgerald, O.W. Dynes, C.E. Wylie, and H.R. Duncan. The students listed were: L.A. Davidson, John W. Cate, Woodrow Luttrell, Phillip Jones, and Luke E. Terry. The charter probably was needed to handle funds from projects as a nonprofit organization. A copy of the charter is printed in the October 1939 issue of *Tennessee Farmer* magazine.

Membership in the Agricultural Club grew over the years with 79 members in 1915 and 144 in 1942. The club was inactive during most of World War II. After the war, membership greatly increased as a large number of veterans enrolled in the college.

> *We have made our appearance into the University very abruptly. But a few years ago an "Ag" student was a joke. Our increase has been phenomenal. May our presence not be obnoxious to the University, but may we enter into every activity of college life with a spirit and zeal which shall command the respect of every other department and shall receive a frequent glance of approval from our guardian, the University.*
>
> *— U.T. Farmer, 1910*

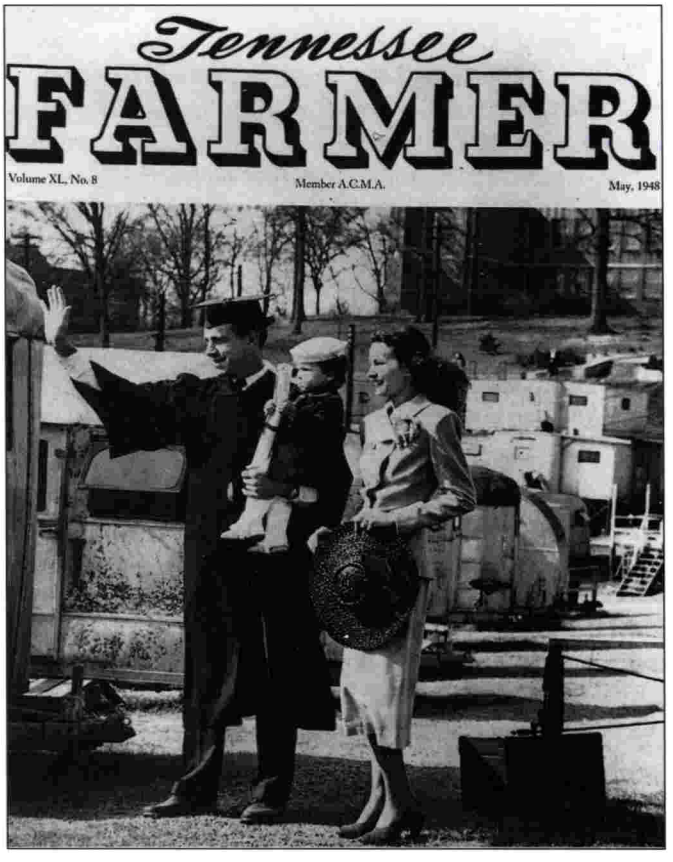
U.T. FARMER & TENNESSEE FARMER

One of the first projects of the Ag Club was the publishing of a monthly magazine called *University of Tennessee Farmer* or *U.T. Farmer*. The first issue was published in the fall of 1906.(4) The publication's name was changed to *Tennessee Farmer* in 1920. It was published every month or every quarter, except periods during the war years, until 1967.

At first the magazine was bulletin size with full-page print; however, in 1921 a three column, 8 x 11.5 inch page size was introduced. There were as many as 2,000 annual subscribers, including Ag Club members, at the time the magazine ceased publication. Annual cost of the magazine varied from seventy-five cents the first year to as little as twenty five cents in later years.

The first editor was L.R. Neel, the club's first president. His editorial in the first issue set a pattern for a great contribution to UT students and Tennessee agriculture. He wrote, "The U.T. Farmer makes its bow to the public modestly with some trepidation and much hope of success. Primarily the organ of the students in the College of Agriculture of The University of Tennessee, its purpose is to establish a closer relation between the university and the farmers of the state."

> *Ag to Home Ec:*
> *"May I have a kiss?"*
>
> *Home Ec:*
> *"I should say not."*
>
> *Ag: "I never kissed a girl and should like to see what it is like."*
>
> *Home Ec: "What do you think I am, an agricultural experiment station?"*
>
> *— Wild Oats, Tennessee Farmer, 1925*



This award-winning Tennessee Farmer *magazine cover featured the Kingston Pike Trailer Village, just down the hill from Morgan Hall. The village sprang up along with other temporary structures to house the booming post-WWII student population. UT football star and war veteran, Dick Jordan, waves goodbye to neighbors with wife, Frances, and daughter, Cheryl, in May of 1948.*

Neel was also editor of the *Volunteer*, the student yearbook, in 1909. He became the first general secretary of the University of Tennessee Alumni Association and launched *Tennessee Alumnus* magazine in 1916. For 68 years he contributed to the *Southern Agriculturist* as writer or editor. During much of that time he was superintendent of the Middle Tennessee Experiment Station. Neel was recognized as one the most outstanding agricultural leaders in Tennessee and the South during his time. He lived to be nearly 100.

Later issues gave the purpose of the *Tennessee Farmer* as : " — informs alumni, parents, students and all others interested in Tennessee agriculture of student activities, research, available curricula and changes in the College of Agriculture. It endeavors to keep its readers abreast of important happenings in Tennessee agriculture and serves as a laboratory to give students opportunities and experiences in editing and publishing a magazine."

The publication fulfilled it mission admirably in informing readers, but perhaps more importantly it gave many students in agriculture and home economics valuable training for future jobs. Many made valuable contributions to both agriculture and to society.

From the first, the magazine contained articles of help to farmers and agricultural businesses. Some were written by faculty; however, many splendid ones were written by students on topics such as current agricultural problems and student activities. Several deans made regular contributions to the magazine with articles about academic programs. Editors in the college communications office gave guidance to the student editors. The publication editors were also advised by the University Publications Board. Professor C.E. Wylie, head of dairying, served on this board for many years.

No where else can there be found, except in the issues of the *U.T. Farmer* and *Tennessee Farmer* for more than 60 years, the history of the College of Agriculture as it pertains to the constantly changing lives of students and faculty.

BARNWARMIN'

One of the major social activities of the university for many years was a function called Barnwarmin'. It was sponsored by the Ag Club, which was assisted by members of the Home Economics Club. The first Barnwarmin' was held in 1921 to "warm" the newly completed Agricultural Hall (later named Morgan Hall).(5)

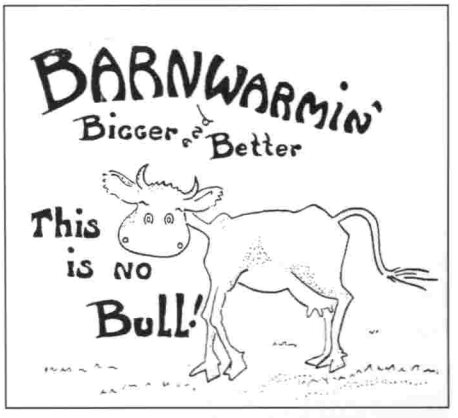
This traditional event was held on the second floor of Morgan Hall, but because of large crowds, was moved to Alumni Gymnasium in 1935. About 1,700 students, alumni and friends attended in 1935, and apparently it was the hit of the season. F.M. Massey, dean of men, made this observation: "I am happy to say that Barnwarmin' this year is the best party I have ever attended."(6)

The function was held during fall quarter, usually on a Friday night in October before a Saturday football game. A parade, with floats by fraternities and other organizations, was often held on Friday afternoon. "Bigger and Better than Ever Before" was the slogan from the beginning. Round dancing occurred on the main floor of the Alumni Gym and square dancing was enjoyed in one of the upper large gyms. The building was decorated with hay and pumpkins. Cider and ginger snaps were the usual refreshments.

In 1923 a Barnwarmin' Girl, later called Barnwarmin' Queen, was selected by event staff. This became a popular addition to the event and was later selected by popular vote.

AG CLUB BANQUET

The annual Ag Club Banquet, sponsored by both ag and home economics students, was the important winter function. This event began about 1913. The program usually included the announcing of awards and an address by a well-known agriculturalist.



Tennessee Farmer, 1930s



1928 Barnwarmin' Girl, Emily Thompson, with Dean Charles Willson (right). The title was "an honor coveted by every aspiring co-ed." The annual fall party, begun in 1921 to "warm" newly completed Morgan Hall, attracted more than 1,000 people. "It was easily the biggest social event in the history of the University, and the Ags put it on!"

STUDENT-FACULTY COUNCIL

In 1963 the Student Faculty Council replaced the Agricultural Club. The club had a long and illustrious life of 57 years; however, times were changing. Enrollment in most departments had greatly increased with an accompanying interest of the students in departmental clubs.

The purposes of the council were: to improve the College of Agriculture by providing a means of communication between the student body and the faculty and the administration; to support and encourage programs and activities of interest to the college; to support and encourage programs and activities of interest and importance to the university, the state and the nation; and to support and encourage programs and activities that will improve relationships between departments and colleges at the university.

The student body of the council is composed of two members elected from each active departmental club in the College of Agricultural Sciences and Natural Resources, two members elected from Alpha Zeta Fraternity and the undergraduate agricultural college representatives to the University Academic Council.

There were 21 student organizations in the college in 1992-93. These included Agricultural Economics-Business Club, American Society of Agricultural Engineers, Society of Agricultural Education Students, Block & Bridle Club, Dairy Club, Food Tech Club, Forestry Club, Society of American Foresters, Ornamental Horticultural Club, Plant and Soil Science Club, Poultry Club, Wildlife and Fisheries Society, Academic Council, Alpha Zeta, 4-H Alumni Corporation, Sigma Alpha (women in agriculture), XI Sigma Pi, FarmHouse, Alpha Gamma Rho, Rodeo Club and Agricultural Communicators of Tomorrow.

A major function of the council has been the annual agricultural awards banquet. Scholarship recipients are honored at this event along with outstanding students and the students with the highest grade point averages in each class. Faculty members also receive awards.(7)

ROUNDUP

Roundup began in the spring of 1937 and remained a major function of the Ag Club for many years until taken over by the Animal Science Department and the Block and Bridle Club. The objective was to give the students training and experience in grooming and showing of several classes of livestock. Professor O.B. Ross of the Animal Husbandry Department suggested the activity to the Agricultural Club.

Students always incorporated a bit of humor into this event. At the third Roundup, horses and mules to be judged by students were named after some of the popular faculty: Dean Jacob, Dr. Peacock, Dr. Wills, Dr. Hervey, Prof. Fitzgerald, and Prof. Wylie. Other events included contests of dressing up lambs by sorority members and harnessing mules or catching greased pigs by the faculty.

Tennessee Farmer, 1953

UT AG CLUB
PRESENTS
The 14th Annual
ROUND - UP
Sat. MAY 9 - 7:30 pm
Temple Hall

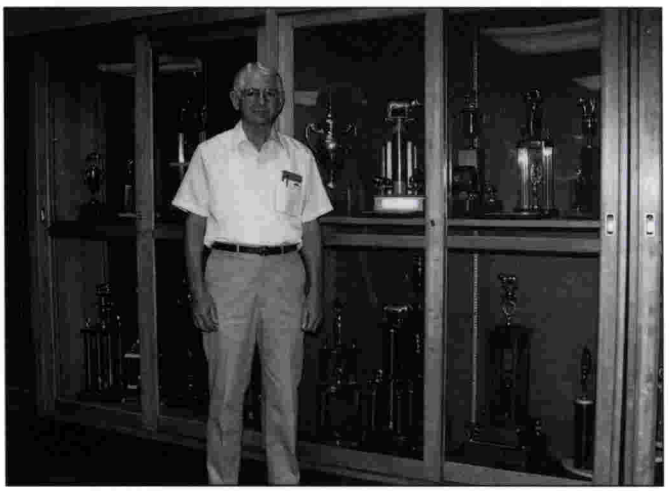
- Dairy and Livestock Showing
- Fraternity Horse Show
- Faculty Acts
- Sorority Milking Contest

DAIRY CLUB

The first organization for agricultural students with special interest was probably the Dairy Club. Begun in 1889, the club sponsored the first UT judging team. It is not clear how long the club survived; however, it was disbanded for a time but revived in 1940. It was discontinued in 1941 because of the war, then reorganized in 1946.



Dean Peacock presents a trophy to a proud winner in sheep competition at Round-Up.



Prof. E.R. Lidvall advised UT livestock judging teams for nearly 40 years. His work brought UT teams into national prominence and garnered many of the trophies on display in Brehm Animal Science Building.

During 1939-40 many clubs were organized, including: agricultural engineering, agronomy, animal husbandry, and dairying. Although the Ag Club continued to be strong, increase in enrollment in these departments led to a need for programs and leadership training in those disciplines.

JUDGING TEAMS

The concept of collegiate livestock judging teams originated at the University of Wisconsin in 1892. The first national collegiate judging contest was held in 1900, the year of Chicago's International Livestock Exposition.

Knoxville Journal & Tribune, March 1901

WILL GO TO ASHEVILLE

U.T. Agricultural Party is to Leave Today.

Will See All the Beauties of Biltmore.

A party of fifty students and their friends from this city and elsewhere will leave this morning at 8:25 for Asheville, N.C., for the purpose of visiting the estate of George W. Vanderbilt. The party will be in the charge of Prof. A.M. Soule; the students who will go are all from the agricultural department of the University of Tennessee.

In the party will be Messrs. Madden and Metler, of the East Tennessee Packing Company, and Mr. J. Otto Kittle of the Cumberland Plateau, who owns 10,000 acres of fine stock-raising country.

Prof. Soule has sent a man ahead of the party to make arrangements for their coming. The party will arrive at Asheville at noon today and will go at once to the Swannanoa Hotel where they will be given a special rate. This afternoon will be spent in driving over the magnificent Biltmore estates of George Vanderbilt.

On tomorrow morning, the students will be examined in stock judging for prizes, and the winners will be announced Wednesday evening on their return.

Tuesday afternoon at the Biltmore school house, the party will be addressed on various farming subjects by the heads of the various departments of the Biltmore farm. No definite plans have been arranged for Tuesday evening. The party will leave Asheville on their return Wednesday morning at 6:10, arriving here at 9 o'clock. On Wednesday evening a social or "smoker" will be held at the agricultural building of the university, and at that time Prof. Soule will announce the winners in the stock-judging contests.

The trip is being anticipated with much pleasure by the students, who are all very enthusiastic over the prospect of seeing the Vanderbilt farm and mansion.

Livestock judging was an important activity early on in the Department of Agriculture. A course in "stock judging" was added to the curriculum in 1904 which presumably included horses, mules, beef cattle, hogs, sheep and dairy cattle. Dr. M. Jacob and Prof. Henry Duncan coached the early teams.

Prof. Wylie, head of the new department of dairying, revived the dairy judging team in 1920 and had 34 participants and ranked 7th out of 20 in the national contest.(8) Later, Prof. Sam Hinton coached the dairy team for many years. The 1969 team distinguished itself not only as high team overall, but also high team in Holsteins and the second, and third individual honors. This team included James Cooper, Dennis Seaman, Robert Fugate and Mike Collins. The dairy judging team has won the Mid-South Intercollegiate Dairy Judging Contest numerous times, including in 1990.

The dairy department and club have sponsored a dairy products judging team for many years with favorable results. Dr. Genevieve Christen coached the team in the early 1990s.

Judging team trophies abound in the multiple display cases that line the hallways of Brehm Hall. These are a tribute to the department's proud tradition of excellence in collegiate livestock, meat, dairy, poultry and horse judging and include trophies won as early as the mid-1920s.

Livestock judging has enjoyed tremendous success and has doubtless involved more student participants than any other judging program in the college. The UT livestock team tied with South Dakota for first place at the Chicago International Live Stock Exposition in 1962. This team, coached by E.R. Lidvall, included members Bob Vantrease, Carl Turner, John Crouch, Jim Bohanon, John Housley, and Tom Looney.

Other notable achievements of the livestock judging team include high team honors at the Southern Intercollegiate Livestock Judging Contest-Mid-South Fair six times during the period 1950 through 1988, and the Southeastern Collegiate Evaluation Contest 15 to 18 times during the period 1955 through 1988, and the Southeastern-North Central Collegiate Contest in 1990.

The J.B. Madden Livestock Judging Contest has been an annual local event at the college since the late 1920s. Madden was president of East Tennessee Packing Co. As a tribute to him and to his deep interest in agricultural students, his family gave the college $1,000 as a memorial in 1924. Annual income from the fund is used for awards to winners of an annual, student-only livestock contest. The importance of this contest to many students is well documented in many issues of *Tennessee Farmer*.

In recent years the Madden Fund has also supported an annual meats judging contest. The meats judging program was vested in the animal husbandry department through 1972, when it was transferred to the newly created department of Food Technology and Science. The meats team has also enjoyed a national reputation for excellence. Prof. J.W. Cole coached team members Bill Spent, Jim Price and Boyd Ramsey to the 1954 championship at the American Royal Livestock Show. He won again in 1955 with members Fowler Ragland, Lawrence Shore, and Carroll Douglas and again in 1957 with team members Jim Bond, Gerald Tucker, and Curtis Lard to retire the rotating trophy. The 1978 UT team, coached by Dr. Gordon Davis, won the contest again.

In 1960 the southeastern universities established the

first live animal evaluation contest in which students are required to estimate a variety of carcass measures of market beef cattle, swine and lambs. The University of Tennessee team won the first contest and has fielded the winning team in more than 60 percent of these contests since. In 1988, the contest was named the Professor Lidvall Live Animal Evaluation Contest in recognition of his leadership and team accomplishments throughout the years.

Dairy and poultry judging programs were vested in the departments of dairying and poultry science, until the departmental merger in 1972. They have since been an integral part of the Animal Science Department undergraduate program. In addition to sponsoring a poultry judging team, the department has, since 1948, managed and hosted one of only two national collegiate poultry judging contests.

In the spring of 1994 the department hosted the 47th Southern Collegiate Poultry Judging Contest. This contest was begun by Dr. O.E. Goff, poultry department head, as a regional "practice" contest to assist in preparing team members for the National Poultry Judging Contest. It quickly evolved into a national contest, though the name Southern Collegiate Poultry Judging Contest has been retained. The contest is cosponsored by Southeastern Poultry and Egg Association and annual funding is provided by Mrs. O.E. Goff and industry contributions.

Until the late 1960s, horses were included in some livestock judging contests. Not until separate horse judging contests were organized did UT sponsor a horse judging team. The first team was fielded in 1968 and competed in the All-American Quarter Horse Congress where team member Jim Heird won high individual. The 1971 team, coached by Heird, won high team in performance judging at the All-American Quarter Horse Congress. In 1973 Patti Andrews was high individual at the Eastern Regional Intercollegiate Horse Judging Contest.

Intercollegiate judging teams are still an integral component of the department's undergraduate program. Students are encouraged to participate regardless of their career goals. Judging activities afford students the opportunity for in-depth study of animal evaluation in primarily an off-campus setting. Teams visit farms, packing houses, and agricultural businesses throughout the Southeast. Student participation enhances self-confidence, decision making, and oral communication — skills valued by many industry employers

BLOCK & BRIDLE CLUB

An Animal Husbandry Club was first organized in 1939. The *Tennessee Farmer* reported that it was reorganized in 1940. Then after the war, the University of Tennessee Block and Bridle Club was chartered and became a part of a national program. Since 1947 the B&B Club has maintained a tradition of being one of the most active student organizations on the UT campus. The 1994 school year marked the 55th Annual B&B Roundup, a tradition begun by the Agricultural Club. Other activities and projects over the years have included the Williams-Henson Boys Home Swine Project, Knoxville Zoo Patron, Toys for Tots, and the Empty Stocking Fund. In 1993 the club sponsored a student from Tennessee School for the Deaf to attend 4-H Camp. Funds for these projects, as well those for departmental judging teams, are raised by serving meals at numerous functions on campus.

AGRONOMY CLUB PLANT AND SOIL SCIENCE CLUB

The Agronomy Club was organized in November 1939, with forty charter members. It became a student section of the American Society of Agronomy and a charter was granted in 1940. Dr. Robert P. Moore, professor of agronomy, was instrumental in starting the club and served as its first advisor. The group was renamed Plant and Soil Science Club in 1973 when the departmental name was changed.

A major activity of the club has been the sponsoring of a soil judging team. Although this type of judging came much later than livestock judging, it has been of great interest to many students. UT teams have been among the most successful collegiate teams in the Southeast. From 1956 through 1991 the teams placed first 14 times and second 12 times in the Southeastern Regional Soil Judging Contest.

Several student judges have been high individuals in the southeastern region including James Beuerlein, Edward Clark, Ric Chester, and Steven Worley. Worley also was high individual scorer in two national contests.

Many of the teams were eligible for and participated in national contests. Coaches have included F.F. Bell, M.E. Springer, H.C. Smith, Randy Miles, D.A. Lietzke, John Graveel, John Foss, and J.T. Ammons.

FRUITS JUDGING TEAM

The first UT team went to the Eastern Intercollegiate Fruit Judging Contest in 1938. Prof. A.E. Mitchell, who had coached two winning teams at Ohio State, coached the UT team. The team won first place in a regional contest in 1940. Prof. Troy Jones also coached the team for many years.

AGRICULTURAL EDUCATION CLUBS

After World War II when enrollment in agriculture increased, an Agricultural Education Club or Ag Ed Club was organized. This group served the needs of students in the

department until the mid 1950s, when the National FFA organization gave UT a charter for a collegiate chapter of the Future Farmers of America. Then in 1966 a new organization without national affiliation, the Society of Agricultural Education Students (SAES), was formed. This club is still in existence in the early 1990s and is one of the most active groups on the agricultural campus.

The society members help with all FFA contests at the regional level in East Tennessee. Another activity is an extemporaneous speaking contest with the winner recognized at the annual awards banquet along with outstanding students of each grade level in the department.

In 1985 members of SAES and students of other universities established the Tennessee Collegiate Agricultural/FFA Association. Students from each of the affiliate campuses meet together each year at the state FFA convention. One event at this meeting is a contest of job interviews for students competing for careers in teaching high school agriculture, agribusiness fields, and production agriculture employment. There is also a scrapbook contest for the competing institutions. Winners from all of these events are recognized at a luncheon during the convention.

4-H CLUB

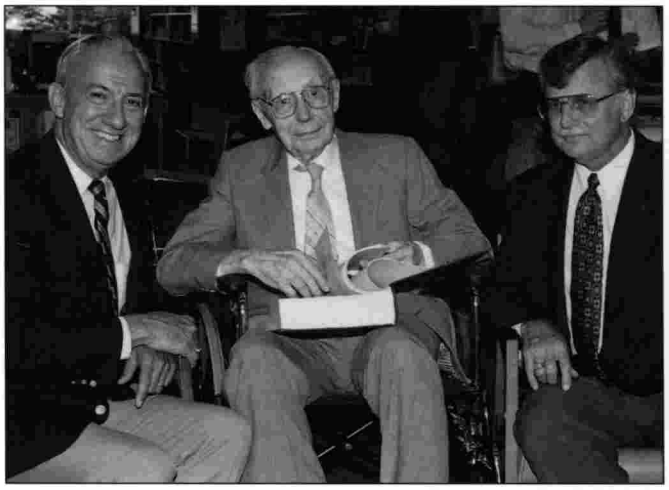
A university 4-H Club was organized in early 1936 for both men and women students of the University of Tennessee College of Agriculture and Home Economics, who had been club members before coming to the university. Others who had contributed to 4-H were eligible for honorary membership. Objectives included encouraging youth to become members of 4-H, urging high school seniors to attend the university, and engaging in activities that would be useful to those who might enter Extension or teaching occupations.

FORESTRY CLUB

The Forestry Club was established even before a four-year forestry program was offered at UT. Early members took a pre-forestry program in horticulture and forestry, and after their sophomore year would transfer to a school in a neighboring state with an accredited forestry program.

Since the establishment of a B.S. program in 1964, forestry majors have been eligible for membership in the student chapter of the Society of American Foresters, the national professional organization. The two organizations now function in concert, with the club handling social events and the chapter handling professional activities such as seminars and professional meetings.

In recent years club/chapter activities have included: encouraging and sponsoring student participation in the Southern Forestry Conclave, assisting with the Tennessee ReLeaf program (talking to and providing tree seedlings to 4th graders throughout Knox County), participating in the Kentucky-Tennessee Section of the Society of American Foresters, and assisting landowners in reforestation programs. Assisting with the Natural Resources Banquet is an annual undertaking that enables both groups to be involved in regional conservation issues.



Dr. A. J. Paulus, a long-time friend of the Ag Ed Club, presented a book of nearly 700 original poems to UT libraries in 1993. Paulus (center) visits with Dr. Roy Lessly (right), head of agricultural and extension education, and with former student Charles Brakebill, UT vice president for development. Paulus wrote poems for Ag Ed Club and Future Farmers of America events.

WILDLIFE AND FISHERIES SOCIETY

The Wildlife and Fisheries Society is a professional society primarily for students majoring in wildlife and fisheries science in the Department of Forestry, Wildlife & Fisheries. The UT chapter was formed in 1969 and is affiliated with the Wildlife Society and American Fisheries Society, which serve professionals in those disciplines.

The chapter provides an avenue for professional and social contacts, provides opportunities for professional field experience, develops an ethic of professionalism, makes suggestions for improving the wildlife and fisheries curricula, and encourages participation in outdoor activities.

AGRICULTURAL ENGINEERS

A student branch of the American Society of Agricultural Engineers was organized in 1939. A report on the student branch was in the *Agricultural Engineering Journal* in 1940.

In 1939 the group sponsored exhibits at the East Tennessee Farmer's Convention including an electric fence, a sericia seed scarifier, a hammer mill with an automatic switch, and a small grain thrasher.

Members today often take honors in Engineer's Day ac-

tivities, competing against students from all engineering disciplines at the University of Tennessee, Knoxville.

ENTOMOLOGY CLUB

An Entomology Club was formed in 1938. Although entomology was taught at that time in the College of Liberal Arts, all the officers were agricultural students. This, no doubt, reflected the interest in economic entomology.

ALPHA ZETA

Alpha Zeta at the University of Tennessee had its beginning in a local organization known as the Helios Club.(9) This club was formed in 1911 with the intention of combining with a national organization having the same ideals.

Alpha Zeta, a national honorary agricultural fraternity, was formed at Ohio State University in 1897. The Helios Club petitioned Alpha Zeta to become a member and was accepted. The chapter was named for H.A. Morgan, then dean of agriculture. The Morgan Chapter became the twenty second chapter of the fraternity on November 9, 1912.

Prof. Charles E. Allred, later head of the Department of Agricultural Economics, was the student leader in forming the Morgan Chapter and became its first chancellor. Professors Morgan and Bain were elected to honorary membership in the fraternity. Charles Willson, professor of animal science and then vice dean, was an AZ advisor for many years.

The purpose of Alpha Zeta is to encourage scholarship, leadership and good fellowship and to bind together a group of men and women interested in the continued advancement of agriculture. Members are selected from the junior and senior classes. Senior faculty members may be elected honorary members while young faculty, who have done work of considerable merit, may be elected to associate membership.

Many outstanding students in the college have been members of Alpha Zeta. The fraternity has added much to the advancement of agricultural zeal on the campus.

GAMMA SIGMA DELTA

Gamma Sigma Delta is an honor society of agriculture whose membership includes undergraduate students, graduate students, faculty, research associates and alumni of the College of Agricultural Sciences and Natural Resources and the College of Veterinary Medicine.(10)

The objectives of the chapter are "to encourage high standards of scholarship, character, leadership, and proficiency in all branches of agricultural science, education and industry."

The UT chapter has annually given merit awards for teaching, research and Extension, as well as nominated members for the International Award for Distinguished Service to Agriculture. It also makes awards to the student with the highest cumulative grade point average in each class of the both the College of Agricultural Sciences & Natural Resources and the College of Veterinary Medicine.

HIGHEST GRADE POINT AVERAGE

Year	Highest GPA	Second Highest GPA
1966 - 67	Bill J. Byerley	Roland Mote
1967 - 68	William Larry Vick	James Richie Pearce
1968 - 69	Vernon Earl Roddy	Dale Patrick Ragain
1969 - 70	William Benton Amos	Jerry Kendall Davis
1970 - 71	Robert Harry Fugate	Donald C. Knight
1971 - 72	Danny Wayne McFall	Donald C. Knight
1972 - 73	Daniel Keith Burt	Glenn Thomas Varner
1973 - 74	Steven E. Monteith	Vivian Peterson Orr
1974 - 75	Elizabeth A. Bryant	Dwight Murphy
1975 - 76	Harry Paul Denton	James Franklin Norton
1976 - 77	Janice Marie McCartt	John Chambers* Steven Stimpson
1977 - 78	David Wachter	John Lyle
1978 - 79	Linda Struk	David Ross Hardin
1979 - 80	Ellen Goothuis	Amy Boyles Bridges
1980 - 81	Jennifer Barron	Carl Allen Griffey
1981 - 82	Steve Worley	Donald K. Moore * Mark D. Thompson
1982 - 83	David Andrew Turner	Lori Christine Jenkins
1983 - 84	Linda Susan Calfee	Elizabeth M. Sutherland
1984 - 85	Kevin A. Belt	Dwayne Allen Turner
1985 - 86	Joe Sarten	David Franklin Grimes
1986 - 87	Thau Kiong Chung	Martha Jane Prince
1987 - 88	Cheri W. Matthews	Kathleen Renick Malueg
1988 - 89	Laura Helene Justus	Jeffrey Franklin Lewis
1989 - 90	Kathleen Anne Moore	Benjamin Lloyd Hafer
1990 - 91	Carey Melinda Williams	Jaye Hamby
1991 - 92	April Teresa Stone	Doris Ann Wilburn
1992 - 93	John Samuel Keller	Elizabeth A. Edwards* Mark Gary Rogers
1993 - 94	Aaron Keith Edwards	Angela Diana Reaves

** Tie in GPA*

Awarded to seniors in the College of Agricultural Sciences and Natural Resources with the highest grade point average

ALPHA GAMMA RHO

Alpha Gamma Rho Fraternity has played an important role in the social lives of many agricultural students and in the training of leaders.

The Alpha Kappa chapter at the university had its historical beginning at the 1947 National Future Farmers of America Convention when Max Cobble, national FFA secre-

AG STUDENT TORCHBEARERS

1933 John C. Franklin	1958 C. Lockwood Marine
1937 Leonard R. Rogers	1959 Billy T. O'Brien
1939 R. Barry Cecil	1962 Thomas E. Looney
1939 George Robert Woodruff	1963 William B. Cowan
1939 Hubert A. Nicholson	1965 Frank K. McCalla
1941 Mark B. Williamson	1966 James F. Amos
1941 Samuel M. Stubblefield	1969 William H. Goddard
1942 Meeks B. Vaughn	1970 Lofton K. Stewart
1944 George A. Baugus	1971 Jerry N. Estes
1947 George L. Carter	1974 Dewayne Ingram
1948 John M. Campbell	1975 E. Alan Cleveland
1948 Tom Vaughn	1976 Johnny R. Tarpley
1949 Dabney S. Welford	1979 Frank S. Moore
1950 Benjamin T. Cockrill	1980 Jim D. Moore
1950 John M. Dement	1982 Stephen Worley
1950 Paul J. Fitzgerald	1983 Ellyn R. Cunningham
1951 William D. Hardison	1983 C. Paul Harrison
1951 William P. Flatt	1986 Lorrie E. Welker
1956 Lawrence B. Shore	1987 David R. Buck
1957 William M. McFee	1992 Shane M. Williams

Seniors chosen by a committee of faculty and students based on scholarship, character, campus leadership and outstanding achievement.

OUTSTANDING SENIORS

Year	Outstanding Seniors
1975	Beauford Wilson, Mary Smith, Alan Cleveland, Bill Reed
1976	James Morris, Michael Booher, William Nichols, Johnny Tarpley
1977	Neil Rhodes, James Nunn, Joyce Meltzer, Robert Cullum
1978	James Hawk, Sandy Knight, Glenn McPeak, Neil Worley
1979	Jean Ann Haston, Frank Moore, William Murphy, Rick Sanders
1980	James Burton, Bill Coley, Steve Harrison, Jim Moore, Sallye Watson
1981	Michael Brown, Louis Buck, John Harrison, Scott Millsap
1982	David Baird, Steve Worley, Terry Disney, Howard Hornsby
1983	Paul Harrison, Sherry L. Ratledge, John Walker, Mary K. Hawk
1984	Ben Cox, Keith Harrison, Bobby Pace, Luke Stapel
1985	Mark Giesemann, Daniel Hurst, Barry Doss, Stanley Word
1986	Joe Huffine, Lorrie Welker, Christi Moser, Kevin Howard
1987	Martha Price, Karen Warren, Bonnie Coley, Reuben Buck
1988	Clyde Bell, Lynda Gayle Hasty, Thomas Powell, David Richesin
1989	William Butler, Wesley Ellison, Troy Hopkins, Chris Martin
1990	Todd Jennings, Daniel Maxwell, Brian Young, Eric Ellison
1991	Sarah Prince Jones, Saundra Campbell, Shane Williams, Johnny Rogers, Mark Powell
1992	Beth Hasty, Leah Carden Thompson, Ginger Wilson, James Little
1993	Ben Marks, Kerri Prince, Scott Snyder, Ruby Williams
1994	Connie Copeland, Greg Fitz, Melissa Hamilton, Kevin Ragland, Gretchen Rector

Seniors majoring in agriculture or natural resources were chosen based on scholastic records, leadership and participation in UT activities.

tary and a UT freshman, met Maynard Coe, a past grand president of the Alpha Gamma Rho Fraternity. Coe and Cobble discussed the possibilities of founding an Alpha Gamma Rho chapter at the University of Tennessee.

In 1949 Coe met with professors of agriculture at UT who were Alpha Gamma Rho alumni and with interested students. Shortly afterward, an Alpha Gamma Rho Club was begun. The club grew in membership and was 35 strong in the fall quarter of 1950. After four years of hard work, the club became the Alpha Kappa Chapter of Alpha Gamma Rho Fraternity in January 1951.

Since those early days, the UT AGR chapter has strived for high levels of scholarship, leadership, and service. The number of alumni is close to 800 strong. The membership is always among the top fraternities in grade point average. AGR men can be found in almost every club and organization on the agricultural campus, and usually in a leadership role.

FARMHOUSE

FarmHouse is a social fraternity with similar objectives and extracurricular activities as other social fraternities. The membership is limited to students who take subjects that can be applied toward a degree in agriculture or related sciences. The chapter at the University of Tennessee began in 1957 when approval was granted to organize a FarmHouse Club with nine charter members.

The Constitution and bylaws of the FarmHouse Association were drawn up and, in May 1958, the Tennessee Association of FarmHouse was legally formed. The Tennessee Chapter of FarmHouse Fraternity was installed on November 7, 1959 and moved into a new house in September 1960.

The fraternity has stressed moral, academic and religious values and its members have exhibited leadership on the agricultural campus as well as on the "hill." Although the fraternity does not have the customary Greek letter designation, the founders wanted a name to tie the organization to a part of life which meant most to the members.

STUDENT HONORS

For many years the Student Faculty Council of the College of Agriculture has selected ten outstanding students on the basis of their scholastic record, leadership ability, and participation in university activities. The four seniors selected for the period 1975 to 1990 are given on the preceding page. Many have gone on to

become leaders in their communities.

Students with the highest grade point average in each of the four classes are also recognized and presented a plaque each year at the council spring banquet along with the outstanding students. The senior students with the highest and second highest GPAs for the academic years 1966-67 through 1989-90 are shown on page 46.

Many honors and awards are made to students majoring in the several departments on the basis of their superior academic records or on leadership and contributions to the department or college programs.

TORCHBEARERS

Each year a limited number of UT students, usually seven to twelve, are chosen to be Torchbearers. Recipients are selected by a committee of faculty and students. The senior award is considered to be the most coveted award given to campus leaders. It is based on scholarship, character, campus activities, campus leadership, and outstanding achievement while on campus. It is said that "he who beareth a torch shadoweth himself to give light to others."

Forty agricultural students were selected as Torchbearers from 1933 to 1992. Recipients are listed in the table on page 47. These young people have gone on to become successful citizens. Leonard Rogers was successful in agricultural business and later became mayor of Knoxville and director of the Tennessee Valley Agricultural and Industrial Fair. Billy Flatt became director of the Georgia Agricultural Experiment Station. Paul Fitzgerald had a successful career in plant breeding with the United States Department of Agriculture. Others have been just as successful.

In 1950, three agricultural students were selected for this honor and in 1941 two were selected. Two brothers, Frank and Jim Moore, were chosen in 1979 and 1980.

In 1991 Jaye Hamby, a senior in agricultural education, received a prestigious $30,000 Harry S. Truman Scholarship. He had been state president and national vice president of Future Farmers of America.

Thanks, Knoxvillians

A big vote of thanks to those considerate Knoxville folks who are so kind in helping the agriculture boys get to and from classes at the "Hill" and on the Farm. Except for your kindness we could not make our classes at both places each day. We do not understand why we shouldn't have a bus to take us back and forth. Thanks again and stop again. You will always find us courteous and appreciative. — *Tennessee Farmer, 1937*

Plaque, Morgan Hall main entrance

IN MEMORY OF
THE ALUMNI AND STUDENTS
OF THE COLLEGE OF AGRICULTURE
WHO MADE THE SUPREME SACRIFICE
IN WORLD WAR II 1941–1945

	Class of		Class of
Andrews, George W.	1940	Hooper, James A.	1943
Bratton, Robert, Jr.	1943	Irwin, Charles B.	1943
Brock, Ben Julian	1945	Jones, Harry W.	1940
Brown, Robert L.	1943	McCutchen, John N.	1942
Butler, Horace F.	1938	Minor, David T.	1945
Cannon, William, Jr.	1940	Morrow, Edward C.	1942
Carpenter, Edwin, Jr.	1938	Needham, Doyle W.	1946
Cato, James Elam	1946	Neely, Thomas W.	1932
Clement, Richard W.	1945	Noblitt, William G.	1941
Cleveland, Dale P.	1939	Paschal, Dwight L.	1941
Colvett, William L.	1939	Paschal, James M.	1941
Cunningham, Perry E.	1941	Rogers, Henry E.	1945
Davis, Paul Francis	1940	Rucker, William B.	1943
Deakins, Richard S.	1942	Tucker, Harold H.	1941
Ellis, George Samuel	1934	Vaughn, William L.	1943
Finnell, Charles R.	1940	Von Hoe, Hunter M.	1945
Fitzgerald, Paul J.	1941	Waters, Henry Dean	1942
Fleming, Forrest W.	1914	Welch, Benjamin, Jr.	1946
Gilstrap, Herman O.	1946	Wilkes, Charles E.	1944
Harris, Edward Lewis	1945	Williams, Woodrow	1941
Harrison, Warner W.	1941	Winton, James Frank	1942
Wood, Stephen Allen	1938		

ERECTED BY THE AGRICULTURAL CLUB
UNIVERSITY OF TENNESSEE, KNOXVILLE

REFERENCES

1. William J. Bales and William L Sanders. *College of Agriculture Alumni Survey*. The University of Tennessee, Feb. 1990.
2. Charles R. Morse. "History of the University of Tennessee," *The University of Tennessee Magazine*, Semi-Centennial "Jubilee." Vol. 50, No. 1, 1920.
3. *Tennessee Farmer*, Vol. 1, No. 1, 1906. Published monthly by University of Tennessee Agricultural Club, Knoxville, Tennessee.
4. See No. 3.
5. *Tennessee Farmer*, Vol. XV, No. 1, October, 1921.
6. *Tennessee Farmer*, Vol. XXIX, No. 2, 1936.
7. Scholarship and Awards Program and Banquet. The University of Tennessee, Knoxville. College of Agricultural Sciences and Natural Resources.
8. *Tennessee Farmer*, Vol. XV, No. 5, Feb. 1922.
9. See No. 2.
10. Constitution and By-laws of The University of Tennessee Chapter of Gamma Sigma Delta, The Honor Society of Agriculture, August 1988.

CHAPTER VI

QUALITY TEACHING & FACULTY HONORS

From the early years to the present, there has been evidence of quality teaching in the UT College of Agricultural Sciences and Natural Resources, as well as able, concerned administrators to guide programs.

What is good teaching? An issue of *Tennessee Farmer* printed this thoughtful poem about a professor's job. The author is unknown.

To provide the inquiring mind with accurate information
To instigate thinking that is clear and strong
To instill high principles and the will to carry on
To encourage sportsmanship that is good
To point out the way to a decent livelihood
To rise above the petty personal things
To always keep an open mind
To show the road upward is always worth the grind
It looks to me from where I stand
That first to be a Prof, you must really be a man

In 1958 John Smalling(1) investigated the opinions of students in the UT College of Agriculture about teacher aptitudes and how they rated their instructors on those attributes. Opinions were obtained from 335 students. From 21 various aptitudes, the students' ratings of their teachers, beginning with the highest, were: interest and enthusiasm, well versed in subject, fair and impartial in dealing with students, sincerely interested in progress or problems of students, and makes students feel free to ask questions, disagree or express own ideas.

Although many other aptitudes were evaluated in the study, it seemed clear that the students placed high values on the most relevant ones and gave most of their teachers high marks on those aptitudes. Agricultural students at UT have generally been more complimentary of their teachers of agriculture than of those in other fields of study.

There have been many fine teachers in the college. However, only in recent years have these teachers been formally recognized. Beginning in 1969, Gamma Sigma Delta, an honorary agricultural fraternity, began awarding outstanding faculty. Recipients of the Teaching Award of Merit are listed in this chapter. One department has had seven professors honored and all present departments are represented.

In 1975 the Student Faculty Council began annually selecting two outstanding teachers, one with under five years of service and the other with over five years. In 1989 the period of service was changed to under 10 years and over 10 years. At this time a cash award from the William and Golda Moss Endowment Fund was begun in addition to a plaque. The recipients of these awards are also listed in this chapter. Four professors, John Graveel, William Park, James Riemann, and Fred Tompkins, have won the award for both the shorter and longer periods of service.

In 1966, a life income agreement was entered into by the university and William Simpson Overton providing that funds in a trust would be transferred to the college and used for educational purposes as determined by the president of the university and the dean of agriculture. The UT board of trustees adopted the following resolution in 1990 upon receipt of the money in the trust: "that the assets of the W.S. Overton Trust be used to establish a quasi-endowment designated as 'W.S.Overton Memorial Fund' with income dedicated to providing funds for the W.S. Overton Distinguished

Professorship in Agriculture and the W.S. Overton Faculty Merit Award." These awards are made through the student-faculty council of the college.

Dr. Fred Tompkins, professor of agricultural engineering, received the first W.S. Overton Distinguished Professor in Agriculture in 1991 and received $5,000. Dr. Edward R. Buckner, professor of forestry, was awarded the first W.S. Overton Faculty Merit Award, also in 1991, and received $1,500. Dr. Gary Lessman, Department of Plant and Soil Science and Larry Wilson, Department of Forestry, Wildlife and Fisheries, have also received these merit awards.

Faculty have received other individual honors over the years. The B. Ray Thompson Outstanding Faculty Award was presented to Dr. Donald Williams for his contribution to teaching. The award is rotated among the four divisions of the Institute of Agriculture. Williams was also named the 1990 Outstanding Undergraduate Educator by the American Society for Horticultural Science.

In recent years Outstanding Teaching Assistant Awards have been given to promising young teachers. These awards include a plaque and $500.

Many of the faculty have received national honors over the years. Most of these are based on multiple attributes including teaching excellence, research accomplishments, and leadership abilities. All such honors received over the years are not known; however, a few examples are noted.

Dr. Charles Mooers, agronomist and director of the Experiment Station, served as president of the American Society of Agronomy. Dr. John E. Foss, head of Plant and Soil Science, was selected president of that organization in 1995.

Dr. John W. Day, associate professor in the department of Ornamental Horticulture and Landscape Design, was awarded the 1993 Chadwick Educator's Award from the American Nurserymen. The award recognizes an outstanding horticulture instructor who has been most effective in teaching, developing horticulture skills in students, and motivating students toward professional accomplishment.

Dr. Robert Shrode was presented the Distinguished Teaching Award by the National Association of Colleges and Teachers of Agriculture in 1976. He also received the Distinguished Teacher Award in 1978 from the American Association of Animal Science.

Dr. Ann Draughon was presented the Outstanding Teaching Recognition Award by the National Association of Colleges and Teachers of Agriculture in 1993. She later became president of the International Association of Milk, Food, and Environmental Sanitarians — the first woman to hold that title in the group's 85-year history.

One measure of how well teachers do their job is how alumni feel about them and how alumni rate the quality of instruction after a number of years away from the institution. In 1990, a survey was made of opinions of alumni about the Institute of Agriculture, including the college. A total of 1,590 agriculture and veterinary medicine graduates were

AGRICULTURE PROFESSORS NAMED ALUMNI OUTSTANDING TEACHERS

1967	Frank F. Bell	Agronomy
1969	Ed R. Lidvall	Animal Husbandry
1975	George Merriman	Animal Science
1978	Ed R. Lidvall	Animal Science
1982	Fred D. Tompkins	Agricultural Engineering
1988	John D. Smalling	Animal Science
1989	Donald Williams	Ornamental Horticulture & Landscape Design
1990	Frank Masincupp	Animal Science
1991	John G. Graveel	Plant & Soil Science
1992	William M. Park	Agricultural Economics

Recipients selected from among all university professors. Awards began in 1967.



Agriculture faculty and staff, including Extension, circa 1937 (l-r) N.E. Fitzgerald, O.W. Dynes, Samuel Atkins, M. Jacob, C.E. Brehm, S. Marcovitch, C.A. Mooers, W.W. Stanley (2nd) G.A. Shuey, C.D. Sherbakoff, Brooks Drain, unknown, J.B. Kirkland, N.D. Peacock, T.B. Harrison (3rd) S.A. Hinton, unknown, W.H. MacIntire, F.J. Walrath, Herbert Henderson, Florence McTeer, Joe Elliott, E.P. Callahan, Allen G. Burg, (back) W.O. Whittle, unknown, B.J. McSpadden, F.H. Broome, unknown, A.T. Hendrix, C.E. Allred, C.A. Hutton, James Anderson, Oma Worley, B.H. Luebke, A.B. Strand. (identified with help from John Sharp, Jim Pointer, Frank Bell, and Frank DeFriese)

selected to receive the survey. The sample was chosen to include a proportional representation from each decade and from each department. Of the respondents, 546 received a B.S. degree in Agriculture and 239 received a graduate degree in agriculture from the University of Tennessee.(2)

Alumni were asked to identify three individuals in the college who had the greatest impact on their academic and professional life. More than 400 individuals were mentioned at least once, and 73 were mentioned five or more times, indicating that a large number of the faculty have had a productive and meaningful relationship with their students. The twenty-five faculty mentioned most frequently are listed on the following page.

Many factors influence the opinions of former students about faculty. The frequency of mention is influenced not only by the characteristics of the teacher in the classroom, but by how long he taught, how many students he taught, and how much he was involved in advising, with judging teams and other activities outside of the classroom. Two of those mentioned, Dr. Glen Hall and Dr. N.D. Peacock, are past deans of the college. Dr. Fitzgerald was dean of the College of Education after he was head of Agricultural Education. It should be noted that Dr. Peacock, Dr. Fitzgerald and Dr. Eric Winters had not had student contact in the classroom or as advisors for many years, but were still remembered for their influence long after the alumni left school.

Two members of the faculty have served as Phi Kappa Phi Lecturer, symbolizing the faculty's commitment to scholarship and community service. This honor was received by Dr. Lloyd Seatz in 1964-65 and by Dr. Henry Fribourg in 1974-75, both professors in plant and soil science.

Dr. Luther Keller, professor of agricultural economics, served as president of the University Senate 1973-74 and was the college's outstanding teacher in 1990. Two former heads of departments, Dr. Lloyd Seatz and Dr. Thomas Whatley, professor of agricultural economics and rural sociology, have held distinguished professorships in the university. Dr. Bob V. Conger, plant and soil science, also holds a distinguished professorship. This recognition is partially based on the leadership given to improved teaching. Distinguished professors receive a $3,000 annual salary supplement.

Dr. Charles Cleland, agricultural economics and rural sociology, served for many years as university ombudsman.

In the alumni survey, 87 percent rated their education in the College of Agriculture as excellent or good while less than two percent rated it poor. About 69 percent thought that the faculty kept abreast of changes and developments in agriculture and incorporated these into the educational process. The alumni were asked, if they were enrolling in a college of agriculture today, would they choose the University of Tennessee? Eighty percent said they would probably or definitely would choose UT again.

Eighty-four percent indicated that they would recommend the University of Tennessee College of Agriculture to an academically talented or highly motivated student. Seventy-six percent believed that the agricultural faculty had an interest in the total growth and development of students. Of those who had an opinion, 61 percent rated the college extremely high or above average as compared to other schools in the United States.

Many alumni surveyed graduated long ago and could not be familiar with the characteristics of the present faculty or the teaching methods used. Nevertheless, the survey would indicate that the alumni have a high regard for the teaching program of the College of Agriculture. On the other hand, only 47 percent of the alumni rated the college excellent or good in assisting them in obtaining their first job.

The National Alumni Association made 95 Alumni Outstanding Teacher Awards to the faculty from 1967 through 1991. Eight professors from the College of Agricultural Sci-

GAMMA SIGMA DELTA TEACHING AWARD OF MERIT

1969	Horace C. Smith	Agronomy
1970	Woodrow W. Overcast	Dairying
1972	George Merriman	Animal Science
1973	Robert R. Shrode	Animal Science
1974	Luther H. Keller	Ag Economics & Rural Sociology
1975	Frank F. Bell	Plant & Soil Science
1976	Merton B. Badenhop	Ag Economics & Rural Sociology
1976	Donald O. Richardson	Animal Science
1977	Franklin O. Leuthold	Ag Economics & Rural Sociology
1978	Homer D. Swingle	Plant & Soil Science
1979	Bobby L. Bledsoe	Agricultural Engineering
1979	Lawrence N. Skold	Plant & Soil Science
1980	Edward R. Lidvall	Animal Science
1981	Hugh O. Jaynes	Food Technology & Science
1982	Ben R. McManus	Ag Economics & Rural Sociology
1983	Fred D. Tompkins	Agricultural Engineering
1984	Vernon H. Reich	Plant & Soil Science
1985	David L. Coffey	Plant & Soil Science
1986	Donald B. Williams	Ornamental Horticulture & Landscape Design
1987	Ronald L. Hay	Forestry Wildlife & Fisheries
1988	John G. Graveel	Plant & Soil Science
1989	Dwight Loveday	Food Technology & Science
1990	William M. Park	Ag Economics & Rural Sociology
1991	Frank B. Masincupp	Animal Science
1992	John W. Day	Ornamental Horticulture & Landscape Design
1993	Jerome F. Grant	Entomology & Plant Pathology
1994	O. Glen Hall	College Dean

COLLEGE OF AGRICULTURE OUTSTANDING TEACHERS

Over Five Years

1975	Horace Smith	Plant & Soil Science
1976	Donald Richardson	Animal Science
1977	Hugh Jaynes	Food Technology & Science
1978	Robert Murphree	Animal Science
1979	Ed Lidvall	Animal Science
1980	Ben McManus	Agricultural Economics
1981	Monty Montgomery	Animal Science
1982	Lloyd Callahan	Ornamental Horticulture & Landscape Design
1983	Karl Barth	Animal Science
1984	Fred Tompkins	Agricultural Engineering
1985	Bobby Bledsoe	Agricultural Engineering
1986	Frank Masincupp	Animal Science
1987	John Mount	Food Technology & Science
1988	John Todd	Ag & Extension Education

Under Five years

1975	Curtis Melton	Food Technology & Science
1976	Fred Tompkins	Agricultural Engineering
1977	James Riemann	Food Technology & Science
1978	Ronald Hay	Forestry, Wildlife & Fisheries
1979	Gordon Davis	Food Technology & Science
1980	Lawson Safley	Agricultural Engineering
1981	David Kendall	Ornamental Horticulture & Landscape Design
1982	James Riemann	Food Technology & Science
1983	Randy Miles	Plant & Soil Science
1984	William Park	Agricultural Economics
1985	Robert von Bernuth	Agricultural Engineering
1986	Benny Bell	Animal Science
1987	John Graveel	Plant & Soil Science
1988	Dwight Loveday	Animal Science

Over Ten Years*

1989	James Riemann	Food Technology & Science
1990	Luther Keller	Agricultural Economics
1991	Michael Davidson	Food Technology & Science
1992	William Backus	Animal Science
1993	Luther Wilhelm	Agricultural Engineering
1994	Marjorie Penfield	Food Science & Technology

Under 10 Years

1989	William Park	Agricultural Economics
1990	John Graveel	Plant & Soil Science
1991	Benny Bell	Animal Science
1992	Greg Pompelli	Agricultural Economics
1993	Paul Winistorfer	Forestry, Wildlife & Fisheries
1994	John Wilkerson	Agricultural Engineering

Awarded by the Ag Student/Faculty Council
**Beginning in 1989, cash awards of $1,500 were provided by the W.F. and Golda Moss Endowment Fund based on 10 years of service. Before 1989, only plaques were given.*

ences and Natural Resources have received this coveted award; one professor received it twice. Recipients of this award receive $1,000 and are listed in this chapter.

Agriculture professors have also received Alumni Public Service Awards. Recipients include: Dr. Don Williams, ornamental horticulture and landscape design, in 1981 and Dr. James G. Snell, agricultural economics, in 1978.

REFERENCES

1. John David Smalling. *Teaching in the University of Tennessee College of Agriculture*. Master's Thesis, 1958.
2. William J. Bales and William L. Sanders. *College of Agriculture Alumni Survey*. The University of Tennessee, Feb. 1990.

TWENTY-FIVE PROFESSORS MOST OFTEN MENTIONED AS INFLUENTIAL BY ALUMNI

Frank Bell	Agronomy
Ed Lidvall	Animal Husbandry
Donald Williams	Ornamental Horticulture & Landscape Design
Glen Hall	Animal Science, College Dean
John Smalling	Animal Science
Horace Smith	Plant & Soil Science
N.E. Fitzgerald	Agricultural Education, Dean of Education
John Todd	Agricultural Education
Luther Keller	Agricultural Economics & Rural Sociology
Hugh Jaynes	Food Technology and Science
Eric Winters	Agronomy
Donald Richardson	Animal Science
N. D. Peacock	Horticulture, College Dean
George Merriman	Animal Science
Edward Buckner	Forestry, Wildlife & Fisheries
Fred Tompkins	Agricultural Engineering
Robert Dotson	Agricultural Education
Cecil Carter	Agricultural & Extension Education
John Day	Ornamental Horticulture & Landscape Design
Curtis Melton	Food Science & Technology
Larry Wilson	Forestry, Wildlife & Fisheries
Ben McManus	Agricultural Economics & Rural Sociology
William Cole	Animal Science
Bobby Bledsoe	Agricultural Engineering
Joseph Alexander	Ornamental Horticulture & Landscape Design

** Source: College of Agriculture Alumni Survey, February 1990. Listed in order of frequency of mention.*

CHAPTER VII

AGRICULTURAL ENGINEERING

The origin of agricultural engineering at the University of Tennessee, Knoxville, can be traced to as early as 1890. Included in an agriculture course that year were three topics related to agricultural engineering: irrigation and drainage, farm buildings, and implements. At that time, all agriculture courses, both practical and scientific, were taught by Prof. Hunter Nicholson.

Beginning about 1902, a course titled soil physics and agricultural engineering was offered. In subsequent years, courses pertaining to agriculture were developed in the department of civil engineering. The 1910-11 *University of Tennessee Register*, later known as the *UT Catalog*, listed a class in land surveying for agricultural students. Course work included "parting off" land, calculation of areas, maps and profiles, and drainage and irrigation.

Engineering courses for agriculture students originally fell under the auspices of the College of Engineering. In the 1916-17 *Register*, included in the rural engineering major, were courses offered as junior and senior electives for agricultural students. They were: forging, woodworking, land surveying, and farm mechanics.

By 1918, surveying and farm mechanics were required for agricultural education and horticulture majors. The 1920-21 *Register* lists these same courses under the rural engineering major. In 1924, precursors to agricultural engineering coursework included elementary surveying, forge and wood shop, farm structures, concrete construction, land drainage and surveying, and farm power engineering.

The 1926-27 academic year was the first time agricultural engineering was listed as a department of instruction in the *Register*. That year, underneath the heading "Agricultural Engineering," the statement "See engineering curricula" appeared. Following is the first description of agricultural engineering as a major at the University of Tennessee.

AGRICULTURAL ENGINEERING

Instructor: Frank D. Jones, B.S. in A.

The College of Engineering, cooperating with the College of Agriculture, offers a four years' curriculum leading to the B.S. Degree in Agricultural Engineering. The curriculum is primarily engineering but contains enough work in agriculture to give a proper background for the engineers who wish to do their work in rural communities. Laboratories and shops are equipped to give instruction of special value to students registered for Agricultural Engineering and also to other students of Agriculture who may elect courses in Agricultural Engineering.

With agricultural engineering now an official major, coursework became more definitive. Courses taught by Prof. Harold A. Arnold in 1930-31 were farm shop, farm motors, farm structures, domestic engineering, farm surveying, drainage and terracing, concrete construction, gas and power en-

gineering and farm machinery.

From the inception of agricultural engineering as a major until about 1935, only one or two students registered in the program each year. Most students enrolled in agricultural engineering courses majored in other agriculture disciplines and took agricultural engineering courses as electives or as required courses within their own major.

Arnold was the only instructor in agricultural engineering until 1935, when he was joined by Prof. Andy T. Hendrix. Hendrix, a native of Knox County with degrees in both mechanical and electrical engineering, was originally on the mechanical engineering faculty.

The agricultural engineering curriculum expanded to include 12 courses in 1935, and classes were held in Estabrook Hall on main campus. In 1936 an existing building on the agriculture campus, an abandoned dairy barn, was renovated for use as laboratory space by the department.

Agricultural engineering's switch from the College of Engineering to the College of Agriculture became official in 1937, and Prof. Marlay A. Sharp was appointed department head. Sharp brought a strong background in engineering education to the department. He had served five years in industrial arts and vocational education in Nebraska, four years as supervisor of agricultural education in South Dakota, and 12 years at Iowa State College in agricultural engineering.(8)

The department gained an additional faculty member in 1937, Prof. Earl K. Rambo. Arnold was moved to the Experiment Station staff. Lectures were conducted in Morgan Hall and laboratories were conducted in the old agricultural engineering building, the converted barn which stood just north of the present agricultural engineering office building.The area is now a staff parking lot.

James C. Hundley was the first student clearly documented as receiving the B.S. degree in agricultural engineering. That degree was awarded in 1937. In the 1938 catalog, agricultural engineering appears in the College of Agriculture listing. Graduate courses in research and special problems are included in the course list. By 1940, there were 13 different agricultural engineering courses, in addition to seminars and graduate research courses.

The first listing of a program designed for students who did not want employment in the technical engineering field but wanted training in both engineering and general agriculture appeared at this time. The rural engineering curriculum specifically targeted students who were interested in farming or in working "in the field of Extension, principally as assistant county agents." In 1950, the name of the program was changed from rural engineering to mechanized agriculture.

In the 1947-48 academic year, 101 students majored in



Just below Morgan Hall and to the right of the greenhouse, two ag engineering facilities were in use circa 1969. Originally a dairy barn built in 1899, the rear building served as lab space until 1981. Then it was razed and the area used for parking after the completion of a state-of-the-art facility adjacent to the (circa 1940) Ag Engineering Office Building (in the foreground).

agricultural engineering. The Tennessee Valley Authority constructed a quonset hut on the agriculture campus that year and leased it to the university for three years. The university ultimately gained ownership of the building and designated it for agricultural engineering research use.

Departmental faculty ranks continued to change and grow as well. In the 1956-57 academic year, Marlay Sharp left the department head position to join the India program (see chapter on international programs) and was replaced by Dr. C.W. Backhop. Prof. Denver O. Baxter, Erwin K. Boyce, and Curtis H. Shelton joined the faculty that year.

The agricultural engineering department head position was filled twice the following decade. In 1960, Dr. James H. Anderson was appointed department head and resigned in 1962. He was followed by Dr. John J. McDow, who remained as department head until 1973. During the same decade, some significant changes occurred in the departmental degree programs. The B.S. degree in agricultural engineering was accredited by the Engineers' Council for Professional Development in 1964, and in 1967, the Ph.D. in agricultural engineering was authorized. Also, the mechanized agriculture curriculum title was officially changed in 1968 to agricultural mechanization.

The 1970s was a decade of significant change and progress for the department. The department's first computer, an Electronics Associates, Inc. TR-20 analog computer, purchased for $3,500, was installed. To further signal the move toward computerization, the department gained direct access, via modem, to a UTCC computer for programming, data input and printed output. This marked the beginning of

computer use in undergraduate department teaching activities. Personnel changes included the appointment of Dr. Houston Luttrell as department head in 1973.



A state-of-the-art computer laboratory was a feature of the new Agricultural Engineering Building in 1982.

More departmental changes and progress occurred in the 1980s. A new classroom/laboratory building was constructed. Along with agricultural engineering laboratories, the new building became home for the College of Agriculture microcomputer laboratory. The microcomputer laboratory has been continually upgraded to maintain state-of-the-art capabilities. In 1988, the undergraduate program in agricultural mechanization was eliminated, and the agricultural mechanization graduate program was officially renamed agricultural engineering technology.

Luttrell retired in 1991 after serving 18 years as department head. He was succeeded by Dr. Fred D. Tompkins, who joined the UT faculty in 1974.

UT AGRICULTURAL ENGINEERING TEACHING FACULTY

Professor	Years of Service	Specialty
Frank Jones	1926-	
Harold Arnold	1927-1958	Power & Machinery
Andy Hendrix	1935-	Power & Machinery
Marley Sharp*	1937-1959	Engineering Ed.
Earl Rambo	1939-1941	Acting Head
William Wheeler	1941-	Soil & Water
G.M. Peterson	1942-	
J.B. Liljedahl	1949-	Power & Machinery
Curtis Shelton	1956-1991	Soil & Water
C.W. Backhop*	1957-1959	Power & Machinery
Erwin K. Boyce	1957-1969	Power & Machinery
Denver Baxter	1957-1996	Farm Structures
James Anderson*	1960-1962	Power & Machinery
Zachary Henry	1961-1997	Food & Processing
John I. Sewell**	1962-1977	Soil & Water
John McDow*	1962-1993	Farm Structures
Houston Luttrell*	1964-1991	Power & Machinery
Bobby Bledsoe	1969 -	Power & Machinery
Luther Wilhelm	1971-	Food & Processing
Fred Tompkins***	1974-1993	Power & Machinery
R.D. Von Bernuth	1982-1990	
Roland Mote*	1983	Waste Management
William Hart	1983 -	Power & Machinery
John Wilkerson	1983 -	Instrumentation/ Controls
Robert Freeland	1985 -	Instrumentation/ Controls
Daniel Yoder	1991 -	Soil & Water
Ronald Yoder	1992 -	Soil & Water
A.R. Womac	1992-	Power & Machinery

** Served as department head*
*** Appointed associate dean of Experiment Station*
**** Appointed associate dean of College of Engineering*

REFERENCES

1. Edward T. Sanford. *Blount College and the University of Tennessee.* A historical address delivered before the Alumni Association and members of the university, June 12, 1884.
2. *The University of Tennessee Register*. Vol 13, No. 2, March 1910.
3. *The University of Tennessee Record*. Vol 23, No. 2, April 1920.
4. *The University of Tennessee Record*. Vol 30, No. 3, May 1927.
5. *The University of Tennessee Record*. Vol 31, No. 3, May 1928.
6. See No. 5.
7. *The University of Tennessee Record*. Vol. 38, No. 3, May 1935.
8. *The Tennessee Farmer*, Vol XXX, No. 3, December 1937.
9. *The University of Tennessee Record*. Vol 42, No. 3, May 1939.
10. *The University of Tennessee Record*. Vol 53, No. 3, May 1950.
11. *The University of Tennessee Record*. Vol 62, No. 1, Jan. 1959.
12. *The University of Tennessee Undergraduate Catalog*, 1988.
13. *The University of Tennessee Graduate Catalog*, 1993.

CHAPTER VIII

AGRICULTURAL ECONOMICS & RURAL SOCIOLOGY

Agricultural economics is a relatively new field of study that appeared on the American academic scene around the turn of the twentieth century. Its parent discipline was most often a cross between agronomy and economics. Agricultural scientists from various fields of study assumed leadership roles in launching the new discipline.(1)

The importance of economics in agriculture was recognized in the early years of agriculture at UT. The agriculture course for seniors lists the topic of "rural economy," which consisted of "lectures applying to farm affairs the universally recognized principles of economy and policy."(2) The list of textbooks for the 1879-80 session included Bonsingault's *Rural Economy*. Time for in-depth study was limited, however, as Prof. Hunter Nicholson was the only professor of agriculture in those years. In 1890 a course in farm management and accounts and farm law was offered.(3) In the next decade little mention was made of rural economics or rural policy in the annual catalogs except for an occasional reference to farm accounts.

In the first report made by the committee on instruction to the Association of Agricultural Colleges in 1896, rural economics was recognized as a division of science. The report recommended that 60 hours of 486 hours in the agricultural curriculum be devoted to rural economics.(4)

After 1900 several colleges began to offer courses in rural economy, including Wisconsin, Massachusetts, New York and Ohio. The Department of Agriculture of the University of Minnesota offered a course in "agricultural economics." The courses offered began to indicate the separation of general agricultural economics from farm management, rural sociology, rural law, and history of agriculture.(5)

The first major move to include farm economics in the UT curriculum was made by Dr. H.A. Morgan. In a letter to President Brown Ayres in 1916, he requested a course in "rural economics with special reference to land laws, taxation, credits, cooperation and markets."

The four-year curriculum in agriculture at the University of Tennessee for 1910-11 did not include any course in economics, farm management or farm accounts. Neither is there mention of these subjects in the annual short course for farmers. The first listing of the subject in the university catalog appeared in academic year 1913-14,(6) showing three hours per week in economics and agricultural economics. All students took the same curriculum until 1919.

The first major move to include farm economics in the UT curriculum was made by Dr. H.A. Morgan. In a letter to President Brown Ayres in 1916, he requested a course in "rural economics with special reference to land laws, taxation, credits, cooperation and markets."(7) Morgan, trained in zoology and entomology, was president of the American Farm Economics Association that year.

The Department of Agricultural Economics was formally established September 1, 1919, with Prof. C.E. Aldred as its head. Aldred, an agronomist and UT alumnus, and was on the Experiment Station staff as a farm management specialist in 1917-18.(8)

Course offerings in agricultural economics for 1921-22 included principles of agricultural economics, farm accounts, rural sociology, farm management, and two courses each in seminars, special studies and surveys.(9)

Prof. Aldred was the only faculty member until 1928. The number of faculty increased to 11 by 1948, 19 by 1975, and to 22 by 1989. Since 1988, some 15 research associate positions have been filled to assist with expanding research initiatives, making a staff of 36.

Five individuals have served as department head: Aldred from 1919-1950, Dr. Erven Long from 1950-58, Dr. Mallory Thorpe from 1956-58, interim while Long was on leave, Dr. T.J. Whatley from 1958-1972, Dr. J.A. Martin from 1972-1988, and Dr. Handy Williamson, Jr. beginning in 1988.

A curriculum in agricultural business was initiated in 1926, administered jointly by the College of Agriculture and the College of Business.(10) A separate curriculum in agricultural economics was initiated then or at a later date. The two were merged in 1988, when the university converted to the semester system, into a single curriculum called agricultural economics and business.

The mission of the teaching program has always been to provide both majors and non-majors a thorough understanding of the social and economic aspects of agriculture and related industries; an understanding and appreciation for the basic theories and concepts of the agricultural economics and rural sociology disciplines; a knowledge of the methods of science and how to apply them to the real world problems; and to prepare them for professional and technical careers related to agricultural economics and rural sociology.

UNDERGRADUATE PROGRAM

The undergraduate program combines general education, agricultural economics and selected business courses to give diversity in the students' program, given the breadth of the job market for B.S. graduates. Undergraduate enrollment peaked in 1977 at 143, declined to 76 in 1987, but has increased since. There were about 120 undergraduates in 1993, and 23 B.S. degrees were awarded that year.

GRADUATE PROGRAMS

The master's degree in agricultural economics was approved in 1926 and a non-thesis option in the master's program was introduced in the 1970s. A total of 401 degrees were conferred through 1992.



The Department of Agricultural Economics was officially established in 1919, coinciding with the construction of Morgan Hall. The department has historically been located there. Courses in "rural economy" were already underway by the time this photo was taken from the roof of Morgan Hall. Dr. Morgan's house is at center, with Kingston Pike in the distance.

A Ph.D. program was initiated in 1962.(11) A total of 83 Ph.D. degrees were awarded between 1965 and 1992. Based on a survey from 1972-1989, the agricultural economics Ph.D. program included 17 percent international students. Some 42 percent of the American students were from Tennessee. While international students have come from Asia, Central America, Africa, the Caribbean, and other regions, a relatively large concentration of students came from India (see chapter on International Programs). Sixty-three percent of the graduates were employed by universities and 28 percent by businesses.

The number of graduate students reached a peak of 65 in 1975, and has fluctuated between 30 and 40 since. Foreign graduate students have declined significantly and in the past few years have accounted for only 10-15 percent of all graduate students. Of 1993 graduate students, 21 were M.S. students and 12 were Ph.D. students. Three were pursing the non-thesis option. In 1933, 14 of the graduate students come from in-state. Only nine of the 33 graduate students received their undergraduate degree from UT.

Graduate assistantships were probably established in 1919, but numbered five or fewer before about 1960. Twelve graduate research assistantships (GRA's) were available in 1975, 21 in 1980, and 20 in 1994. These Experiment Station-funded positions have varied over time and decreased with reduced funding.

Requirements for both the M.S. and Ph.D. programs were revised extensively in the process of converting from the quarter to the semester system. The doctoral program includes concentrations in agricultural marketing and price

analysis; agricultural policy; farm management and production economics; natural resource economics; and rural development. Course offerings have expanded significantly since the 1960s. In the M.S. thesis program, concentrations can be in agricultural economics or rural sociology.(12)

Preliminary examinations in economic theory for Ph.D. students are administered jointly with the faculty in the Department of Economics from the the College of Business. Faculty from the Department of Economics frequently serve on dissertation committees of Ph.D. students in the Department of Agricultural Economics and Rural Sociology. Likewise, agricultural economics faculty often serve on the Ph.D. committees of students in economics. Several rural sociology courses are cross-listed with the Department of Sociology.

Many research projects used in the training of graduate students are interdisciplinary in nature, particularly with the departments of animal science, plant and soil science, and agricultural engineering.

THE FACULTY

A list of 1994 faculty is given in the table below. Former teachers are listed in the table above. In 1993-94 the department had 22 tenure-track faculty positions, including only 4.1 Faculty Teaching Equivalents (F.T.E.s). One faculty member is budgeted half-time as director of International Programs. Although these programs are often research-oriented, they contribute to the education of students. Of the 18 resident faculty, 14 were tenured, 12 were full professors, two associate professors, and three assistant professors.

That year, faculty specializations included: six in marketing, six in farm management and production economics, three in rural sociology, two in resource economics, and one each in finance and agricultural policy. All held joint teaching/research appointments in the College of Agricultural Sciences and Natural Resources and the UT Agricultural Experiment Station. The percentage of salary allotted to teaching ranged from 10 to 50, averaging about 29 percent. The faculty received terminal degrees from 14 different institutions.

The teaching budget between increased about 15 percent 1984-85 and 1988-89, about the same as inflation. Professional salaries increased nearly 19 percent.

FACILITIES AND SUPPORT SERVICES

The department has traditionally been housed in approximately 9,700 square feet of space on the third and fourth floors of Morgan Hall. For many years the space was crowed, inconvenient and in need of renovation and modernization. Extensive updating began about 1988.

AGRICULTURAL ECONOMICS & RURAL SOCIOLOGY FORMER TEACHING FACULTY

Professor	Years of Service
Charles Aldred*	1919-1957
Samuel Atkins **	1928-1958
J.E. Wills	1937-1939
W.P. Ranney	1939-1959
Merton Badenhop **	1946-1988
Joseph Martin*	1947-1988
Thomas Whatley*	1947-1972
F.P. Bowers	1948-19
John Fischer	1948-1953
Erven Long*	1950-1959
Robert Spitze	1951-1960
Irving Dubov	1955-1987
D. Mallory Thorpe*	1956-1958
David W. Brown	1956-1982
Charles Murphey	1957-19
Charles Fuller	1958-1966
Thomas Klindt	1974-1990
Charles Sappington	1967-1989
Ben McManus	1970-1992

** Served as department head*
*** Served College in other capacities*
**** Appointed associate dean of Experiment Station*

FACULTY OF AGRICULTURAL ECONOMICS & RURAL SOCIOLOGY

Professors	Years of Service**	Specialty
L.H. Keller	36	Production Economics
C.L. Clelland	34	Rural Sociology
F.O. Leuthold	25	Rural Sociology
S.D. Mundy	21	Production Economics
J.R. Brooker	18	Marketing
D.L. McLemore	16	Marketing
R.H. Orr	16	Rural Sociology
D.B. Eastwood	15	Marketing
W.M. Park	12	Resource Economics
R.K. Roberts	8	Production Economics
G.K. Pompelli	7	Marketing
B.C. English	6	Production Economics
J.K. Jenson	6	Marketing
H. Williamson, Jr.*	6	Economic Development
P. Jakus	2	Natural Resources
G. Davis	2	Marketing/International Trade
P. Siegel	2	International Development
J.A. Larson	1	Farm Mgmt./Prod. Economics

** Served as department head* ***As of 1994*

REFERENCES

1. Alfred C. True, *A History of Agricultural Education in the United States, 1875-1925.* United States Department of Agriculture, misc. pub. no. 36, 1929. U.S. Printing Office.
2. *The University of Tennessee Register,* 1874-75.
3. *The University of Tennessee Register,* 1890.
4. See 1.
5. See 1.
6. *The University of Tennessee Record,* Vol. 16, No. 1, March 1913.
7. Dean H.A. Morgan, personal letter to UT President Brown Ayres, 1916.
8. *The Tennessee Farmer.* Vol XXXI, No. 5, February 1938.
9. *The University of Tennessee Record.* Vol. 24, No.1, April 1921.
10. *The University of Tennessee Record.* Vol. 29 No. 3, May 1926.
11. *The University Catalog.* Vol. 65, No. 3, May 1962.
12. *The University of Tennessee Graduate Catalog*, 1988.

CHAPTER IX
THE ANIMAL SCIENCES

DEVELOPING A DISCIPLINE

In 1899 the Association of Agricultural Colleges considered a syllabus for a degree in zootechny. An agricultural instruction committee suggested the four-year course.

Zootechny was defined as the theory and practice of the production of animals useful to man. The term had been adopted from foreign usage, particularly in Germany, as indicating the scientific character of the course. Animal diseases were not covered in the area of study. Topics included were not only about farm animals but other useful mammals, birds, fishes, beneficial insects, and frogs.

Zootechny did not acquire general use in this country; the term animal husbandry was better understood and thus more commonly used.(1)

In the early years agricultural colleges, including the University of Tennessee, placed more emphasis on studying plants and soils than on farm animals. This was due in part to the abundance of wild animals available for meat and to the growing of cereal grains as major farm enterprises. However, types and breeds of livestock, the judging of animals, and animal breeding were studied. A great deal of emphasis was placed on compounding rations for farm animals.(2)

The first farm animals at UT were purchased about 1870. The first herd of dairy cows was added in 1881. Early teachers of animal husbandry also taught all other phases of agriculture. One early chairman and teacher of agriculture, Prof. Charles Plumb, wrote a textbook entitled *Types and Breeds of Farm Animals* about 1900.(3)

Animal husbandry was recognized as a special phase of agriculture at the University of Tennessee about the turn of the century. Dr. Moses Jacob, a veterinarian, joined the faculty in 1900 and taught both animal husbandry and veterinary science. Prof. Sam Barnes came in 1901 and taught the first courses in dairy husbandry. During this period, feeds, feeding and stock judging seemed to receive the most attention.(4).

"Zootechny was defined as the theory and practice of production of animals useful to man."

In 1907, animal husbandry, dairying, and agronomy were the courses in agriculture. Prof. C.A. Willson joined the faculty in 1910. At about this time, courses in advanced judging, experimental breeding, meat production, and stock farm management were added to the curriculum. Prof. Henry Duncan, a native of Blount County and a cattle grower, joined the staff and taught both animal and dairy husbandry for many years.

Prof. C.E. Wylie came in 1916 to strengthen the dairy husbandry area of instruction. Animal husbandry and dairying became separate departments in 1922.(5) Prof. Ben McSpadden joined the animal husbandry department in 1922 to teach the first courses in poultry. A department of poultry was formed in 1948.

In 1972 a new department of animal science was formed. It included the production phases of animal husbandry, poultry husbandry, dairying and pre-veterinary medicine. Meat and milk product areas were combined with an existing department to form a food technology department.

DAIRYING

The catalog of 1876-77 first mentions the teaching of dairying at the University of Tennessee. A dairy farming course was included in the senior year.

In 1881 a herd of registered Jersey cattle was established on the UT farm. This herd was needed not only for the collegiate teaching program but also for short courses offered to farmers. Dairy farming was among the subjects taught by Hunter Nicholson, the first chairman of agriculture.

The invention of the Babcock milk tester in 1890 greatly stimulated interest in dairying. The increase in scientific knowledge, especially in bacteriology, also gave the agricultural colleges an opportunity to manufacture safe dairy products including butter, cheese, and ice cream. A general core of college courses in dairying was suggested by a national committee on instruction in 1900.(6) This program included the source, standards, handling and uses of milk; milk and cream preparation, delivery, and sale; butter and cheese-making equipment and marketing. These recommendations no doubt influenced dairy teaching programs nationwide including instruction at the University of Tennessee.

Prof. Andrew M. Soule, chairman of the agriculture department and teacher of animal husbandry, wrote the following in the 1901 *Record*:

> *For the purpose of fostering an industry so well adapted to the agricultural needs of Tennessee and providing those desiring it with practical instruction in the science and art of dairying, the Board of Trustees of the University have this year erected a large building devoted entirely to this work.*(7)

Also in the 1901 *Record*, a description of the annual short course in agriculture included 60 lectures and exercises on farm dairying, factory dairying, cheese making, preservation of milk, milk testing, and the care of boilers and engines. Each student was required to spend 30 days in the dairy building so that he could be carefully drilled in the various features of the work.

In the 1902 *Record*, Soule described the dairy course and in the 1903 issue, Prof. S.E. Barnes wrote a section on dairy husbandry. During this period W.A. Campbell was the dairy herdsman. Campbell served as superintendent of the university farm for many years.

Prof. Charles Willson taught both animal husbandry and dairy husbandry in 1910. Two courses in dairying were offered: elements of dairying and dairy farming. There were 17 seniors, juniors, and sophomores in agricultural science during the 1910-11 school year; therefore, the dairy classes were very small.



Students practice swine judging on the UT Farm around the turn of the century. UT had abandoned its military requirements, but some students (second from left) enrolled in cadet training.

Two other special programs were offered during the year in which dairying was a part. The agricultural summer course for teachers had an enrollment of 130. The winter short course for farmers included two weeks on dairy husbandry consisting of 24 hours on dairy breeds and judging dairy cattle, 12 hours on feeds and feeding, 12 hours on farm crops for dairy herds, 12 hours on veterinary science, and 12 afternoons in dairy practice. Sixty-five farmers and farm youth took this course. One $10 prize was awarded the student most proficient in the handling of cream separators. It is clear that during the early years of the agricultural department, more effort was spent in teaching dairying to farmers than to the college students.(8).

The April 24, 1915, issue of *Elgin Dairy Report* reprinted an article from *Hoard's Dairyman* which discussed the importance of the University Cooperative Creamery to the farmers in the area near UT. Prof. Duncan, a popular teacher of animal husbandry for many years, taught dairying in 1915. The dairy herd had increased to about 50 cows. Milk was sold in buckets at the dairy barn to the people of Knoxville. Work on the farm and in the dairy provided opportunities for students to earn a large part of their school expenses.

Prof. Charles Wylie joined the animal husbandry faculty of the College of Agriculture in 1916 as an assistant in dairying and was made associate professor in 1917. A letter from Dr. H.A. Morgan to Dr. Brown Ayres, then president of the university, concerning the teaching force in the College of Agriculture, began with this request:

> *I have explained to you my idea with reference to the placing of Professor Wylie on the basis of associate professor of animal husbandry and dairying. He has been offered much more money than we could pay*

him, but I am sure that he would be contented to remain with us at $1800 per year. He is the type of man we need to guide our students; he is a good teacher, of strong individuality, and a most earnest, constructive worker."(9)

In the same letter, Morgan stated that both Wylie and Willson were asking for a fellowship student in animal husbandry and dairying to assist in the large amount of laboratory work given in their courses.

During these early years all laboratory classes were held in the basement of Morrill Hall on the "Hill." The first student to graduate in dairying was Joseph Hopkins in 1917. He became dairy Extension specialist at West Virginia University. About this time B.J. McSpadden was the butter-maker for the Cooperative Creamery. He later became a professor in the departments of animal husbandry and poultry and also assisted Dr. N.D. Peacock in the office of the dean of resident instruction for many years.

Six courses listed under dairy husbandry for the first time in 1918-19 were: elements of dairying, dairy farming, dairy breeds and judging, dairy manufacturing, dairy bacteriology, dairy research, and dairy seminar.(10) Dairying, which had been taught in the animal husbandry department, became a separate department in 1922 with Prof. C.E. Wylie as the first head. Morgan Hall was the home of the dairying department until McCord Hall was built.

Prof. Thomas B. Harrison joined the dairy faculty in 1923 as assistant professor of dairy manufacturing and was placed in charge of the creamery in addition to teaching the courses in dairy products and manufacturing. Harrison served with distinction until his retirement in 1964. He started making ice cream in 1923. UT ice cream became a favorite of hundreds of students as well as of many Knoxville citizens for many years. The creamery also supplied the campus community with other milk products until 1989. Students enjoyed Harrison's jolly disposition and his reciting of the poem, "Killing of Dan McGrew."

Samuel A. Hinton came as an instructor in 1929 and assisted Wylie in teaching dairy production courses. Hinton taught dairy herd management and coached the dairy cattle judging teams until his retirement in 1971.

By 1930 three courses were offered for students who wished to specialize in dairy manufacturing and needed practical experience in a creamery. Three courses in dairy herd practice were available for those specializing in dairying. Courses also included ice cream making, market milk and cheese making, butter making, dairy testing, dairy products judging, and advanced dairying. A total of 28 courses were offered in 1930, including six for graduate credit. The department also offered a one-year course in dairying for those unable to take the four-year curriculum and to prepare students for dairy work not requiring a college degree.(11)



C.E. Wylie

There were few major changes in the dairying curriculum by 1940. Herbert B. Henderson, who had done undergraduate work at UT, taught dairy manufacturing. In 1943 he became head of the dairy department at the University of Georgia, and was later elected president of the American Dairy Association.

William Roberts was on the dairy faculty from 1943 to 1945 and left to become head of dairy manufacturing at North Carolina State University.

The dairying department started an annual two-day short course for dairy fieldmen, dairy sanitarians, and dairy farm and plant advisors in 1952. The 38th annual offering of this dairy short course was held in 1990. The course was reorganized in 1972, the year dairying became a part of food technology, and then became a project of the Extension service rather than the teaching department.

Prof. Wylie retired in 1960 after serving UT 43 years as professor and head of the department. He was an admired teacher and his enthusiasm had a great impact upon faculty,

DAIRYING DEPARTMENT TEACHING FACULTY

Professor	Years	Specialty
Charles Wylie	1917-1960	Head, General Dairying
Thomas Harrison	1923-1964	Dairy Manufacturing
Samuel Hinton	1929-1971	Dairy Herd Management
Herbert Henderson	1935-1943	Dairy Manufacturing
Herman Carringer**	1943-1972	Dairy Manufacturing
William Roberts	1943-1945	Dairy Manufacturing
Eric Swanson	1946-1972	Dairy Cattle Nutrition
Woodrow Overcast**	1946-1972	Dairy Microbiology
T.W. Albretch	1950-1958	Dairy Chemistry
Robert Lush	1950-1965	Forage Utilization
Robert Cragle	1955-1970	Dairy Physiology
L.J. Boyd	1956-1962	Dairy Cattle Breeding
Bobby Demott**	1958-1972	Dairy Manufacturing
J.T. Miles**	1960-1972	Head, Dairy Nutrition
Don Richardson*	1963-1972	Dairy Cattle Breeding
M.J. Montgomery*	1965-1972	Dairy Cattle Nutrition
Hugh Jaynes**	1970-1972	Dairy Chemistry

** To Animal Science 1972 ** To Food Technology 1972*

students, and on the Tennessee dairy industry. He taught a course in public relations to seniors in the college that was unique for that time. He also served on the university publications council for many years.

Dr. J.T. Miles was appointed head of the department in 1962.(12) He had been a student at UT Junior College at Martin and at UT Knoxville before joining the dairy department at Mississippi State University.

A major in dairying was offered from the time the department was created until 1962. Then the curriculum was revised to provide a B.S. degree with a major in either dairy production or dairy manufacturing with corresponding M.S. majors. Until 1972 options were also offered in production, business or science. In 1972 the department was merged with others to form food technology and science. Faculty who taught dairy manufacturing were transferred to this department. Faculty in dairy production were transferred to another new department, animal science. Years of service in the new departments is included in faculty lists.

Early records do not show the number of B.S. degrees awarded in dairying; however, from 1953 through 1975 there were 193. The master's degree was approved in 1906 with the first master's degree being granted in 1924. From this date through 1973, a total of 106 M.S. degrees were awarded in dairying. Although the department ceased to exist in 1972, students were allowed to obtain their degrees in the major under which they started. The only woman on record as receiving a degree in dairying was Rebecca Ann Chester. She graduated in 1975 and became a dairy farmer.

DAIRYING AND POULTRY GRADUATES

Year	B.S.		M.S.*	
	Dairy	Poultry	Dairy	Poultry
1953	7	1	1	0
1954	3	0	5	1
1955	14	2	3	1
1956	7	0	0	0
1957	12	1	5	0
1958	18	1	1	1
1959	12	3	4	3
1960	9	4	7	1
1961	6	0	4	4
1962	5	1	4	0
1963	5	0	7	3
1964	7	0	4	3
1965	4	1	2	1
1966	6	0	4	1
1967	5	0	5	1
1968	8	1	3	2
1969	9	1	1	1
1970	10	0	2	0
1971	13	0	4	0
1972	4	1	5	2
1973	8	0	1	0
1974	15	0		
1975	6	0		

**Compiled by Diana Lopez & Ann Lacava, Graduate Admissions & Records*

University of Tennessee Creamery

Let's All Cooperate

Please do not put your bottle caps
back on empty milk bottles

Thank You

Tennessee Farmer, 1946

POULTRY DEPARTMENT

In the early years of agricultural colleges there was some instruction in poultry and, in a few cases, a poultry department. Both meat and egg production were studied. Training and practice were given in caponizing, control and treatment of diseases, construction of poultry houses and use of incubators and brooders.(13)

Prior to World War II, the poultry industry in Tennessee was small and generally limited to small chicken and turkey flocks, small poultry houses, and limited machinery for incubation, brooding, growing and maintaining flocks. Usually day-old chicks were purchased with males sold as fryers and females grown out to produce eggs. Turkey "drives" helped fill live bird railway cars for delivery to New York. Later, especially in the 1950s, there were several large turkey flocks in East Tennessee.

Because the poultry industry was small, few students were interested in this field and there was little demand for poultry husbandry. Poultry was a minor subject in the curriculum at UT for many years. Although poultry was taught to some extent, in animal husbandry courses, Prof. Ben J. McSpadden was the only teacher and researcher in poultry for many years and he spent part of his time on other duties in the college. McSpadden was a native of Knox County and a 1920 graduate of UT. He came to the department of animal husbandry in 1922 following a stint in the university vocational training department.

After World War II, the poultry industry began to change rapidly. Larger production units were needed to supply the demand for poultry products. To meet the need for more instruction and research in poultry, Dr. O.E. Goff was hired in 1947 to head the newly established poultry department.(14) He held this position until his death in 1971.

Facilities for poultry teaching and research were very limited when Goff arrived. The poultry farm consisted of 33 acres on Cherokee Farm with four small poultry houses and a caretaker's house. Facilities were expanded to 12 poultry

ANIMAL HUSBANDRY/ ANIMAL SCIENCE GRADUATES

Year	B.S.	M.S.	Ph.D.*
1960	14	8	
1961	12	8	
1962	18	8	
1963	13	6	
1964	25	11	
1965	23	16	2
1966	24	12	4
1967	31	7	5
1968	31	15	6
1969	36	13	5
1970	36	4	1
1971	49	12	4
1972	31	17	9
1973	42	12	9
1974	45	15	8
1975	47	20	7
1976	79	15	5
1977	71	19	3
1978	92	18	3
1979	87	18	3
1980	72	22	3
1981	73	15	4
1982	63	10	3
1983	56	14	2
1984	53	9	6
1985	56	5	5
1986	54	14	1
1987	38	10	2
1988	53	10	3
1989	38	5	1
1990	29	9	5
Total	**1,782**	**426**	**109**

**Ph.D. not conferred until 1965*

houses and supporting buildings that could house up to 9,000 mature experimental chickens. Offices and classrooms were located in McCord Hall after it was completed in 1949.

During his tenure, Goff expanded the faculty: Teaching were: Goff; McSpadden, poultry production; Dr. Homer Patrick, poultry nutrition; Dr. H.V. Shirley, genetics; Dr. Robert L. Tugwell, health; and George McGee, production. Later, Dr. Robert H. Harms, meats, and Dr. Karl Bletner, poultry nutritionist, joined the faculty.

JUDGING TEAM COACHES

Livestock	
M. Jacob	1905-10
C.A. Willson	1910-23
H.R. Duncan	1923-36
O.B. Ross	1937-39
M.C. Hervey	1940
L.H. Pease	1941-43
Forrest McClain	1946-48
E.R. Lidvall	1949-56
Howard Miller	1957-59
E.R. Lidvall	1960-88
W.R. Backus	1989-
Meats	
J.W. Cole	1948-68
W.R. Backus	1970, 73
C.C. Melton	1971, 74
M.J. Riemann	1975-76
G. Davis	1977-79
M.J. Riemann	1980-83
H.D. Loveday	1985-
Dairy Cattle	
C.E. Wylie	1922-32
S.A. Hinton	1932-71
D.O. Richardson	1972-82
B.R. Bell	1983-
Dairy Products	
T.B. Harrison	1923-64
H.B. Henderson	1935-43
H.N. Carringer	1964-72
Poultry	
G.T. Mountney	1950
E.O. Essary	1951-52
F.R. Tarver	1956
R.H. Harms	1957
I.O. Kidd	1958-59
R.L. Tugwell	1964
J.K. Bletner	1965-68
H.V. Shirley	1970-76
G.C. McGhee	1977-87
M.O. Smith	1988-
Horses	
C.C. Chamberlain	1968-70
J. Heird	1971
W.R. Backus	1973-

For many years, in addition to the undergraduate and graduate courses in poultry, the department contributed to a team-taught course designed to better prepare beginning students for more advanced courses in animal agriculture. The master's degree in poultry was approved in 1948, and 33 M.S. degrees were awarded before the department was dissolved in 1972. At that time the poultry teaching faculty was incorporated into the animal science department.

ANIMAL HUSBANDRY & ANIMAL SCIENCE

C.A. Willson, who was appointed assistant dean of the college in charge of the teaching program in 1919, was also the first head of the department of animal husbandry. He kept that position until 1922. Moses Jacob was head for 22 years (1922-43); the last six of those years he was also either acting or dean of the college.(15) Other leaders, heads, or acting heads were Henry R. Duncan (1944-47), Charles S. Hobbs (1947-1971), Sam L. Hansard, acting head (1972-73), R.R. Johnson (1974-81), D.O. Richardson (1982-88), J.B. McLaren, acting head (1988-89), and K.R. Robbins (1989).

No detailed record of undergraduate degrees before 1937 exists. Most students were awarded a B.S. degree in agriculture. From 1937 through 1990 there have been a total of 1,782 receiving a B.S. degree in either animal husbandry or animal science. Because of World War II there were no graduates in 1945 and 1946. The largest group receiving a B.S. degree in animal science was in 1978 with 92; 29 graduated in 1990. The master of science degree with a major in animal husbandry was approved in 1907. The first M.S. degree was awarded in 1930 and a total of 224 were conferred through 1974. A master's degree in animal science was approved in 1972. The Ph.D. degree was approved in 1960 with the first degree awarded in 1965.

ANIMAL HUSBANDRY GRADUATES

Year	B.S.	M.S.*	Year	B.S.	M.S.
1937	3	0	1949	25	2
1938	8	1	1950	52	3
1939	8	0	1951	39	3
1940	16	1	1952	15	4
1941	15	1	1953	22	8
1942	4	1	1954	23	4
1943	4	0	1955	30	7
1944	3	0	1956	36	6
1945	0	0	1957	24	10
1946	0	0	1958	15	12
1947	17	2	1959	13	9
1948	19	4			

**Two M.S. degrees awarded between 1907 and 1937*

The first woman, Ruth D. Carpenter, matriculated in the department in 1938. Apparently no more women graduated until 1951 when Marie Oglesby Lawhon and Georgia Root both graduated. Harriet Corrick, wife of Dr. Jim Corrick, a faculty member in the department, was the first woman to receive a graduate degree. She received the Ph.D. in 1973. In 1974, Carol Clark was the first woman to receive the M.S. degree. Women account for 40 of the M.S. degrees and eight of the Ph.D degrees awarded through the early 1990s.



At the dedication of Brehm Animal Science Building(l-r) UT Trustee and ag graduate Clyde York, UT President Dr. Andy Holt, Governor Gordon Browning, and Dr. Cloide Everettt Brehm.

ANIMAL SCIENCE FACULTY

Professor	Year Appointed	Specialty
K.R. Robbins	1979	Head, Poultry Nutrition
W.R. Backus	1969	Beef Cattle Management
B.R. Bell	1983	Dairy Cattle Breeding
Janice Bright	1986	Cardiovascular Pulmonary
H. Eier	1976	Veterinary Physiology
B.H. Erickson	1960	Reproductive Physiology
J.D. Godkin	1983	Endocrinology
J.M. Grizzle	1991	Molecular Biology
R.N. Heitmann	1979	Ruminant Nutrition
R.W. Henry	1983	Electron Microscopy
J.P. Hitchcock	1975	Swine Nutrition
H.G. Kattesh	1979	Endocrinology
F.B. Masincupp	1971	Swine Management
A.G. Mathew	1993	Nutritional Microbiology
T.P McDonald	1965	Platelet Physiology
C. Mendis-Handagama	1991	Histology
J.K. Miller	1961	Mineral Nutrition
S.P. Oliver	1984	Mammary Physiology
J.D. Quigley	1988	Livestock management
T.K. Rowles	1991	Veterinary Anatomy
A.M. Saxton	1992	Histology & Toxicology
T.W. Schultz	1982	Histology & Embryology
M.H. Sims	1976	Veterinary Physiology
J.D. Smalling	1961	Livestock Management
M.O. Smith	1988	Poultry Management
J.C. Waller	1984	Beef Cattle Management

VETERINARY SCIENCE

Veterinary science courses were taught for many years by Dr. Moses Jacob in the Department of Animal Husbandry. Then other veterinarians, including Dr. Dennis Sikes and Dr. George Merriman, taught courses in veterinary science. A pre-veterinary medicine program began in 1950 as a two-year program. In 1970,the program was revised to three years. An arrangement was made through the Southern Regional Educational Board for Auburn University to accept Tennessee students in that institution's College of Veterinary Medicine. From 1950 to 1965, Auburn accepted 10 Tennessee residents per year. The number was increased to 15 in 1966 and to 19 in 1975. Ohio State University and Tuskegee University also accepted three and two Tennessee residents, respectively, in their veterinary programs.

The UT College of Veterinary Medicine accepted its first class in 1976. That year, what is commonly known as the "three and one" program began. This allowed students who completed three years of pre-veterinary requirements in the animal science department to obtain a B.S. degree from UT after successfully completing a year in the College of Veterinary Medicine. This program remains and all students in pre-vet are in the "three and one" program. In 1990, approval was granted to "grandfather" students into the program who graduated from Auburn's College of Veterinary Medicine.

ANIMAL SCIENCE

Since 1972, the animal science department has served students interested in food animals, dairy, poultry, and horses in addition to those in pre-veterinary medicine. A major change occurred in 1988 when UT converted from the quarter system to the semester system. Many poultry courses were dropped with poultry topics being added to other courses such as management, breeding and nutrition. A senior level course in laboratory, zoo, and companion animal management was added to the curriculum that year.

In response to a 1990 agriculture alumni survey, the curriculum in animal science was revised. The new program, effective fall semester 1992, includes two concentrations — production/management and science/technology. The production /management option serves about 60 percent of the students with the science/technology serving the other 40 percent. All students complete a basic core requirement in animal science and in general education. Students selecting the production/management option take courses to further

develop their skills in production agriculture and business. Students electing the science/technology program increase their knowledge of the physical and biological sciences. Along with increased attention to communication skills and problem solving, each group of students will be better equipped for jobs in the decades ahead.

The pre-veterinary program is part of the science/ technology concentration, although some students complete those requirements in the production/management option. These programs operate with a discipline orientation — nutrition, physiology or management. However,as juniors and seniors, students may adjust course work toward beef, sheep, swine, poultry, horses, and laboratory, zoo and companion animals.

By 1993, the department offered more than 30 courses in animal science for undergraduates and an equal number for graduate students.

Another major change in the structure of the department occurred with the birth of the College of Veterinary Medicine. Animal Science faculty in anatomy, histology, biochemistry, and physiology have joint teaching/research appointments in the College of Veterinary Medicine. This is one of very few such arrangements in the United States and serves to illustrate the cooperation and multi-disciplinary approaches to agricultural teaching and research.

The dedication of former and present faculty and the alumni of the department is illustrated through the scholarships and awards made to students. For the 1991-92 academic year,over $25,000 was made available to students in animal science through awards, funds and scholarships.

There were several growth periods during the history of this department, as with other existing departments, when student enrollment greatly increased. After both World War I and II, the enrollment increased significantly because of the interruption of the college education over several years and the liberal "G.I. Bill" that financed the education of a large number of veterans.

A significant increase in faculty, especially after World War II, was needed to teach the large number of classes required. Among the new faculty in animal husbandry were Dr. Harold Smith, Dr. Charles Chamberlain, Prof. Ed Lidvall, Dr. Robert Murphy, Dr. Dennis Sikes, and Prof. John Cole. Others added in the early 1950s included Dr. Marvin Bell, Prof. Fred Powell, and Dr. George Merriman. A complete list of the former and present faculty in the department is given in the tables on this page and on the preceding page.

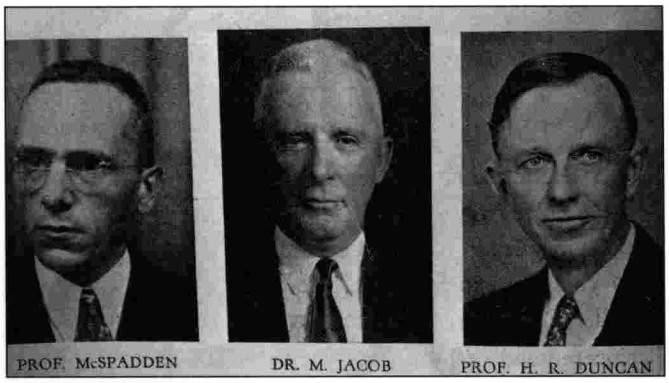
Another major increase in undergraduate enrollment in the animal science department occurred in the mid 1970s because of the formation of the College of Veterinary Medicine. At that time, certain agricultural courses, primarily those in animal husbandry, were required and most students with veterinary medicine career objectives matriculated through this department.

While no official records were kept of jobs taken by ani-

FORMER TEACHING FACULTY

Professor	Years	Specialty
Moses Jacob+	1900-1943	Veterinary Science
Samuel Barnes	1901-1906	Dairy Husbandry
Charles Willson+	1910-1936	Livestock Production
Henry Duncan	1923-1959	Livestock Production
Ben Mc Spadden++	1926-1947	Poultry Production
Sam Hansard	1937-1957	Animal Nutrition
Oscar Ross	1937-1939	Livestock Production
Marshall Hervey	1938-1949	Nutrition & Genetics
Lawrence Pease	1940-1943	Livestock Management
George Bible	1943-1944	Livestock Management
Malcolm Kerr	1944-1948	Livestock Management
Forrest McClain	1946-1948	Livestock Management
Charles Hobbs+	1947-1971	Livestock Management
Dennis Sikes	1947-1950	Veterinary Medicine
John Cole	1948-1968	Meats
Fred Powell	1948-1953	Animal Production
Harold Smith*	1949-1967	Animal Breeding
Charles Chamberlain	1949-1982	Animal Nutrition
Ed R. Lidvall	1949-1988	Animal Production
Robert Murphree	1949-1982	Animal Reproduction
Marvin Carl Bell	1951-1986	Beef Nutrition
George Merriman	1953-1980	Veterinary Medicine
O. Glen Hall**	1956-1964	Animal Nutrition
Karl Barth	1965-1992	Animal Nutrition
Haley Jamison	1965-1973	Animal Production
Boyd Ramsey	1966-1968	Meats
Robert Shrode	1966-1990	Animal Breeding
James McLaren	1966-1989	Animal Nutrition
James Neel	1969-1973	Animal Production
J. Karl Bletner+++	1972-1978	Poultry Nutrition
M.J. Montgomery++++	1972-1989	Dairy Production
Don Richardson+***	1972-1988	Dairy Genetics
Robert Tugwell+++	1972-1981	Poultry Diseases
Hershel Shirley+++	1972-1988	Poultry Production
George McGhee+++	1972-1990	Poultry Management
Ronald Johnson+	1974-1981	Livestock Management

* *Dean at UT Martin 1967-1992*
** *Dean at Martin 1964-67, named Knoxville dean 1967*
*** *Dean of Experiment Station beginning in 1988*
\+ *Served as head of the department*
++ *Service in poultry department after 1947*
+++ *Service in poultry department prior to 1972*
++++ *Service in dairying department prior to 1972*



For years, all animal husbandry courses at UT were taught by Prof. Ben J. McSpadden. Dr. M. Jacob, and Prof. H.R. Duncan.

mal husbandry/animal science graduates until 1985, one would suspect that prior to the 1970s, many graduates were employed in some aspect of production agriculture. This would include herdsmen/managers, livestock grooming and fitting, as well as owner/operators of farming operations. The 1970s saw more students entering college with intentions of pursuing professional degrees and it was also a time in which the business world of agriculture was rapidly expanding, which led to a multitude of other opportunities for graduates in animal agriculture.

Since 1985, graduates in animal science have typically found employment in the following areas:

Areas of Employment	Percent of Graduates
Production Agriculture	< 10 %
Services	> 60 %
Processing	10 %
Education	15 %
Others	5 %

Production jobs also include those starting positions with vertically integrated corporations, especially swine companies. In the services category, most employees start as a sales representative with feed, pharmaceutical and equipment companies. The service group also includes managers and fieldpersons with farm stores and cooperatives.

Graduates entering the processing industry will most likely decrease with the disappearance of many packing companies, although opportunities will still abound in food distribution, product development, and quality control. The percentage of graduates entering education will likely increase as the industry moves further into the biotechnology era. Those finding employment in other areas will likely remain constant. As animal agriculture continues to advance scientifically, other categories of employment will undoubtedly be added to the list. As past records indicate, the Department of Animal Science will make the necessary changes to effectively prepare the students of the future.

REFERENCES

1. Alfred C. True. *A History of Agricultural Education in the United States,1785-1925*, United States Department of Agriculture Misc. Pub. No. 36, 1929.
2. *The University of Tennessee Record, 1901-02.* Published by the University Press.
3. See No. 2.
4. See No. 2.
5. *The University of Tennessee Record*, Vol. 20, No. 1, April 1917.
6. See No. 1.
7. See No. 2.
8. *The University of Tennessee Record*, Vol. 13, No. 2, March 1910.
9. Unpublished letter from H.A. Morgan to President Brown Ayres.
10. *The University of Tennessee Record*, Vol. 22, No. 1, April 1919.
11. *The University of Tennessee Record*, Vol. 27, No. 1, April 1930.
12. *The University of Tennessee Record*, Vol. 66, No. 3, May 1963.
13. See No. 1.
14. *The University of Tennessee Record*, Vol 50, No. 3, May 1947.
15. *The Tennessee Farmer*, Vol XXX, No. 2, November 1936.

CHAPTER X

AGRICULTURAL EDUCATION & EXTENSION EDUCATION

Agricultural education at the University of Tennessee traces its beginnings to 1916. In a report to UT president Dr. Brown Ayres, the dean of the College of Agriculture, Dr. Harcourt A. Morgan, expressed the need for the subject. He wrote:

> *There are two departments which normally belong to agricultural courses, which we have been unable to provide: agricultural education and rural economics. It is true that these courses may be given in other institutions, but since investigations in soils and crop and animal production are the acknowledged work of the university, we should without question give stronger courses in agricultural education and rural economics than institutions where agricultural investigation is not available. These departments are more seriously demanded since organization of the agricultural division and the preparation of men and women for this service devolves upon us.* (1)

The Smith-Hughes Act, which gave federal aid to states to teach agriculture in land-grant colleges, was passed in 1918. In January 1919, N.E. Fitzgerald, an associate professor of agricultural education at Texas A & M College, met with Morgan to discuss the possibility of establishing a department at UT. Prof. Fitzgerald came to UT the following April to begin developing the department and a program to provide training for teachers of vocational agriculture.(2)

Thus began a long and illustrious career for Fitzgerald in the College of Agriculture, then as a professor in the College of Education and finally as dean of that college. Also with his arrival began a long, successful program of instruction and practice teaching in both agriculture and education at the University of Tennessee.

> *"...only one teacher showed up. Morgan gave him a pig and sent him home."*

The original office and classrooms were in Morrill Hall on the south side of the "Hill." It housed all resident teaching departments in agriculture then. The department moved to the new Agricultural Hall (Morgan Hall) in 1921, and was given quarters on the third floor in the east wing where it remained until moved to the second floor in 1976.

From April to August of 1919, Fitzgerald was loaned to the State Board for Vocational Education. He was to develop a new program to train teachers on the job. He and Prof. Ogden of Middle Tennessee State Normal School visited every program in the state, assisting them in program planning and in obtaining reimbursement for operating costs.

Most of the teachers at that time were trained in agriculture but had little or no training in teaching techniques. An agricultural education class on the UT campus was scheduled for the summer of 1919. However, only one teacher showed up. Morgan gave him a pig and sent him home.

During the 1919-20 school year, 87 students were enrolled in agricultural education — 15 in the regular session and 75 in the summer session.(3) In 1922 the College of Agriculture graduated eight seniors and four others who were qualified to teach Smith-Hughes vocational agriculture. They

were issued five-year teaching certificates to teach in Tennessee. At the end of the 1923-24 year, including the summer session, an additional 17 were graduated and certified.

The first courses in teacher training for these early graduates were general and theoretical. They included psychology, principles, general methods, rural problems, vocational education, and a special methods course. A total of 18 semester hours was required by state law. Some practical training was gained from observing teachers in the field.

Itinerant teacher training, a nonresident teacher training program, was provided in a state plan which resulted in establishing cooperation between the teacher training institution and the state supervisor of agricultural education. Itinerant teacher trainers from UT helped vo-ag teachers organize their work, use better methods of teaching, supervise student projects (later called supervised farming programs), and supervise study. This training began in September 1919.

A farm shop program was developed in 1921 by H.C. Graybeal — first for a few inexperienced teachers and then expanded to improve programs for more experienced teachers. The agricultural engineering department helped develop a model farm shop as a training laboratory for beginning teachers and also for experienced teachers who came to campus during the summer. Graybeal and Fitzgerald implemented a philosophy that shop training should be correlated with other agricultural work rather than taught as a separate course in farm mechanics.(4)

A state plan for 1922-27 called for observation and practice teaching. A program at Young High School in Knox County was attempted the first year; however, only 12 high school students were interested. Central High School, which was two miles outside the city limits of Knoxville, was the first successful school in the practice teaching program. Forty students were enrolled there the first year under the direction of A.L. Rubin, who was largely paid by UT.

The practice teachers, as they were then called, earned five semester hours of credit by completing the program. Their experiences included studying school facilities, observing the vocational teacher teach, learning procedures for setting up a vocational agricultural program and doing some teaching themselves. In the early days of the program, the students did practice teaching every other day — one day on campus taking courses and one day in a practice teaching center. In 1925, student teachers began the practice of visiting students' projects or farming programs. This phase of the program has continued.

Farragut, Karns, and Gibbs High Schools in Knox County became practice teaching centers. J.W. Brimm served as the supervisory teacher at Farragut from 1928 until 1936. He was followed by Bennett Brown and H.E. Gibson. W.E. Robertson was the teacher at Karns, who was followed by J.B. Kirkland. C.F. Rollins was the first teacher at Gibbs. Max Clendenen was also a supervisory teacher.

During the depression of the 1930s, agricultural jobs were very scarce and the pay generally very low. Teaching vocational agriculture became one of the best positions available. Therefore, enrollment was higher in agricultural education than for most other departments in the college. Following World War II the demand for vocational agricultural teachers again increased, partially due to the need for people to train veterans in farm programs.

Through the years, faculty members have taken turns supervising programs of the student teachers. This usually included spending at least one day per visit in the school observing the student teacher, critiquing the teaching performance, and conferring with the local teacher and school administrator. Usually one or two student teachers were assigned to a center. The professor would visit each center three to five times each quarter or semester.

A 1938 annual report included these activities of practice teachers: observing for six weeks prior to actual teaching, teaching freshmen and sophomores for four weeks, teaching part-time classes and observing others, and teaching a minimum of two adult classes and observing 10 others.

Beginning in 1938, two types of specialists were employed in agricultural education by UT and the State Department of Education. Dr. A.J. Paulus served as a subject matter specialist for 28 years, preparing more than 40 publications and numerous teaching materials for vo-ag teachers. Dr. Paulus was assisted by others in the preparation of teaching materials. Due to lack of funds the subject matter position was discontinued when he retired in 1964. Many students say they remember Paulus as an interesting teacher of summer field courses and for his unique talent in writing poetry. His book of poetry, composed from 1921 to 1991, contained many poems about his work and agricultural friends and was presented to UT libraries in a ceremony just a few weeks before he died at the age of 99 in September 1993.

Dr. E.B. Knight served as research specialist from 1938 to 1949 and conducted numerous surveys and wrote research publications relating to agricultural education. Later, Dr. Ray Cardozier was employed to conduct research. This position was phased out after Cardozier accepted another position.

Student teaching changed very little for many years; however, many changes occurred in the 1980s when increased emphasis was placed upon "excellence in education." Some of the changes included requiring an internship by an upcoming junior in a school before being placed for student teaching, requiring a full semester (about 15 weeks)

of student teaching, and allowing 12 semester hours of earned credit. An admissions board was established to screen students and make recommendations for admission to the professional courses in the teacher education program. The board included a professor of agricultural and extension education, a faculty member from a technical field in the College of Agriculture, a high school agriculture teacher, and an advanced student in agricultural and extension education. The student was required to have a minimum grade point average of 2.5 to be eligible for screening by the board.



N.E. Fitzgerald

Prof. Fitzgerald served as head of the department from 1919 until he became dean of the College of Education in 1942. He continued to have a great influence on the department until his retirement. In 1942 the department was transferred to the College of Education; the faculty and classrooms, however, remained in Morgan Hall and have been there ever since. Students continued to receive their degree in agriculture. Kirkland served as head of the department from 1942 until taking the same position at North Carolina State University in 1948. He was followed by Dr. Bonard Wilson (1948-54). Dr. Paulus served as acting head in 1954-55. Dr. George Wiegers was made head in 1955 and served in that capacity for 17 years.

In 1971 the vocational-technical education department in the Department of Education was formed, grouping together five vocational departments as service areas, including agricultural education. Dr. Wiegers became chairman of the new service area under the department head and served in that capacity until 1976. Dr. John Todd, who joined the staff in 1966, served as chairman from 1976 until the title was changed to coordinator in 1980.

From 1942 through 1985, agricultural education was a joint program of the Colleges of Agriculture and Education. The undergraduate degree program was administered by the College of Agriculture and the faculty and teacher education program by the College of Education. All program changes were processed and approved by representatives of both colleges. Certification of vocational agricultural teachers continued to be handled by the College of Education.

Agricultural education functioned as a separate department in the College of Agriculture for 23 years, as a department in the College of Education for 29 years, and as a service area within technological and adult education for 15 additional years.

Through the years agricultural education has been funded from three major sources: the university, the federal government, and state government. During the 1950s UT was reimbursed more than 75 percent from federal and state funds. By the early 1970s the program was reimbursed at approximately 50 percent. The vocational education division further reduced the 1975-76 funding ($240,000) by about 50 percent ($120,800).

Since that date, outside funding has been on an approved project basis. This funding was through contracts for performing education activities. Under a special contract in 1979, curriculum materials in ornamental horticulture were developed under the direction of Dr. Todd and Dr. David Craig. There has also been an annual contract each year for funding other activities. The amount of this contract has increased from about $8,000 in 1976 to over $20,000 in 1990. Activities included in-service training for agricultural education teachers, programs for beginning teachers, serving as consultant to the State Department of Education, directing FFA camps, conducting workshops for teachers, assisting with the state FFA Convention and coordinating many FFA contests at both the regional and state level.

Traditionally, agricultural education had been restricted to male students. Young women were admitted into the Future Farmers of America organization in 1969. This resulted in an increase of females in high school agricultural education classes. Legislation was passed requiring sex equity in institutions and occupations receiving federal funds. The field of teaching high school agriculture, consequently, became open for female teachers.

A few women students had enrolled in agricultural education courses as electives, but the first to enroll for the purpose of becoming certified to teach was Terry Niblack. She enrolled in 1976, later taught ornamental horticulture at Farragut High School, then in 1978 received her professional certificate. Sue Munsey was probably the first female agricultural education teacher to be hired in Tennessee. She taught ornamental horticulture at Madisonville Vocational Center for several years, beginning in 1976. Several women have received certification since then.

On January 1, 1986, the agricultural education program was transferred to the College of Agriculture and combined with the Department of Agricultural Extension to become the new Department of Agricultural and Extension Education. Dr. John Todd, the only faculty member, and one secretarial position made the change. Facilities for the two former departments were adjoining on the second floor of Morgan Hall, making the merger merely an administrative change.

The master's degree in agricultural education was approved in 1928, and a total of 172 degrees were awarded through 1988. Hundreds of graduates of the department have made important contributions to agriculture through their teaching and leadership in vocational departments. Others made their value felt through leadership at the district and state level.

Kenneth K. Mitchell was named *Progressive Farmer* magazine's 1991 Man of the Year in recognition of his contributions to vocational agricultural education and Future Farmers of America during his 40-year career as a teacher, state education supervisor, and FFA advisor.

Other graduates in agricultural education made significant contributions to the state's agriculture industry in other ways. Clyde York, following several years of teaching, became president of the Tennessee Farm Bureau Federation and served on the board of trustees of the University of Tennessee for many years. As a member of the agricultural committee of the board he had considerable influence on policies and progress of the college.

Another ag education graduate who made many contributions to UT is Jesse Safley. His guidance in fund-raising for the college and personal contributions have meant much to the department. Former vo-ag teacher, Charles Brakebill, returned to the university during the presidency of Dr. Andy Holt, and became executive vice president for development.

AG EXTENSION EDUCATION

The agricultural extension education department, like the agricultural education department, was formed for the training of a specific group — in this case, county agricultural extension agents and home economics extension agents.

Although workshops and other in-service programs were conducted by the late 1930s, it was not until 1954 that formal courses in extension methods were offered and the Department of Extension Methods was formed. Dr. Vernon Darter founded the department and laid the groundwork for the department's mission in teaching and other activities.(1)

Darter left the department in 1957 to become director of the Agricultural Extension Service. Dr. Lewis H. Dickson replaced Darter as department head in 1957 and served until 1967. Under his leadership, two related programs leading to the M.S. degree, with either a major or minor in extension methods, were developed: curriculum and courses, and the winter course for agents which was started in 1959.(2)

Dickson left in 1967 to work with the college's international program. He returned to the department in 1977. Dr. Robert S. Dotson came on board as an assistant methods specialist in 1959. He became department head in 1967 and served until his death in 1985. Dotson directed the department through a substantial increase in graduate programs for extension agents.

Dr. Claire E. Gilbert taught courses in Extension methods in the College of Home Economics from 1947 to 1969. She spent two years in India, from 1955 to 1957, and in 1958 was in graduate school at Cornell. Under Gilbert's direction, a major in home demonstration methods, a program to prepare women to work in extension, was offered in the College of Home Economics. She also taught courses in agricultural extension and advised candidates for the M.S. degree.

Cecil (Ted) Carter joined the staff in 1967 as assistant training and studies specialist. He taught courses on program evaluation, on history, philosophy and objectives of extension, and on managing extension organizations, programs, and resources.. He also advised numerous students through their graduate programs.

This department never offered an undergraduate program leading to the B.S. degree; its strength was the development of a graduate program though a series of winter sessions for Extension agents. It offered courses in extension methods, while other departments in the College of Agricul-

TEACHING FACULTY IN AGRICULTURAL EDUCATION *

Professor	Years of Service
N.E. Fitzgerald**	1919-1932
William O. Lockhart	1919-1923
John P. Buck	1920-1925
Albert Barnett	1920-1922
H.C. Graybeal	1921-1924
Alfred L. Rubin	1925-1934
Ernest D. Stiver	1924-1935
E.B. Knight	1938-1949
Albert J. Paulus	1938-1964
J.Bryant Kirkland**	1936-1948
Bonard S. Wilson**	1947-1955
Rufus W. Beamer	1949-1962
George Wiegers**	1949-1985
Harvey Sharpe	1954-1955
Robert Warmbrod	1956-1957
V. Ray Cardozier	1957-1960
Otto P. Legg	1962-1965
John D. Todd**+	1966-1986
David C. Craig	1966-1984

* *Other faculty supervised student teachers at high schools*
** *Head, chair, or coordinator of department or service area*
\+ *Merged with new Agricultural & Extension Education Department in 1986*

tural Sciences and Natural Resources and in the College of Human Ecology offered courses adapted for the needs of this special group.

Since 1959 nearly 900 students, around 30 per year, have participated in this unique program. More than 35 courses from 11 different departments have been offered through planning and cooperation between the departments. Although most of the students have been extension agents on temporary, paid leave from their counties during the winter, a few full-time students have also participated. For a number of years the department also had many graduate students from India, and a few from the Philippines, the Middle East, Southeast Asia and other areas.

The M.S. degree was approved for Agricultural Extension in 1959 with 207 degrees awarded since that time.

An internship program called extension field training was first offered in the summer of 1959. Interns work in an extension office under the supervision of the extension leader and participate in all phases of the county program. They receive a small stipend and university credit in addition to invaluable practical experience. Since 1968, approximately 230 students have participated in this program.

DEPARTMENTS MERGE

The departments of Agricultural Education and Agricultural Extension Education were merged in 1986 to form the Department of Agricultural and Extension Education.(3) The merger was designed to provide strength and support to both areas by combining efforts into a single mission. By the early 1990s, students numbers varied from 80 to 90 per year.

Dr. Roy R. Lessly became department head in 1986. He taught courses on extension teaching methods and program planning and advised graduate and undergraduate students.

Dr. John Todd, a longtime faculty member in agricultural education, came to the new department at the time of the merger. Dr. Randol G. Waters joined the department in 1989. His duties included teaching a research methodology course and advising graduate students.

The department offers courses such as:

- field experience in agricultural education
- agricultural experience and leadership with adult programs
- strategies for teaching and program planning in agriculture
- fundamentals of agricultural extension
- methods of teaching mechanics
- student teaching in agricultural education
- agricultural and extension internship.

This department is jointly administered by the College of Agricultural Sciences and Natural Resources and the Agricultural Extension Service. Faculty have been involved in the teaching program in addition to other extension activities.



The Agricultural Education Department at UT, circa 1983: (standing l-r) Dr. David Craig, Dr. George Weigers, Dr. John Todd; and (seated) departmental secretary Mildred Nave.

Others in the department are not on the resident teaching faculty. Robert W. Burney transferred from agricultural extension economics in 1986, and Steven Burns was added to the staff in 1989. Both teach computer applications to county extension personnel and to extension specialists.

Internships have been funded in recent years by Philip Morris, USA. Several students from this and other departments spend most of the summer in county extension offices. They work in all aspects of the educational programs under the guidance of local extension personnel. Philip Morris also has funded scholarships for students in the College of Agricultural Sciences and Natural Resources. One of the purposes of this program is to improve the teaching of agriculture in high schools by recruiting potential teachers with a good background in agriculture.

The master's in agricultural and extension education was approved in 1987 with 43 degrees conferred by 1994.

REFERENCES

1. Dean H. A. Morgan, Personal letter to President Brown Ayres, 1916.
2. *The Tennessee Farmer*, Vol. XXX, No. 2, November 1936.
3. *The University of Tennessee Record*, Vol. 23, No. 1, April 1920.
4. *The University of Tennessee Record*, Vol. 24, No. 1, April 1921.
5. *The University of Tennessee Record*, Vol. 58, No. 3, 1955.
6. *The University of Tennessee Record*, Vol. 63, No. 1, 1960.

CHAPTER XI

ENTOMOLOGY & PLANT PATHOLOGY

Prior to 1964, there was no teaching program in entomology or plant pathology on the agricultural campus. Plant pathology was probably first included in a botany and horticulture course taught from 1889 to 1892 by noted botanist Frank Lamson-Scribner.

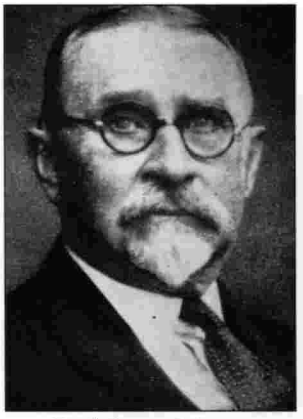
Scribner was one of a group of educators appointed by Charles Dabney, then president of UT, as part of an overall effort to focus on practical education. Scribner had been the first federal plant pathologist in the United States and was well-known among botanists in both the U.S. and Europe.(1)

Prof. Samuel Bain introduced the first course in plant pathology in the school of botany and horticulture about 1904. Samuel Essary also taught pathology.(2) Dr. L.R. Hesler replaced Bain as head of botany in 1919 and taught two courses in introductory plant pathology — a lecture course and companion laboratory. Hesler was a very popular teacher for many years before he became dean of the College of Liberal Arts.

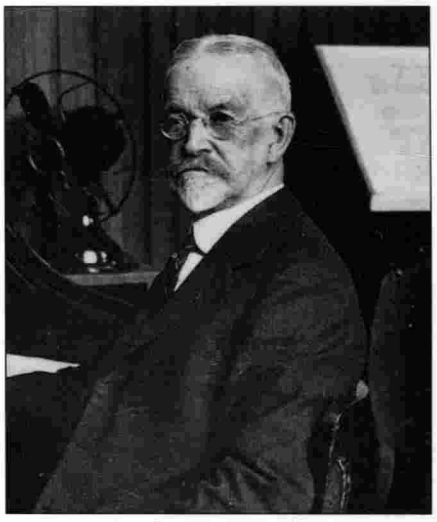
Dr. Harcourt Morgan came to UT in 1904 as professor of zoology and entomology, as well as director of the Agricultural Experiment Station.(3) He taught economic entomology both to regular students and to students in summer short courses for teachers. Prof. Gordon M. Bentley joined the faculty in 1905. Bentley taught entomology, including beekeeping, for many years. Like Morgan, Bentley also served as state entomologist and plant pathologist.

TO THE AGRICULTURE CAMPUS

Agricultural Hall, now Morgan Hall, was completed in 1921. Research in plant pathology and a portion of the entomology research moved to the new facility in 1925. Dr. C.D. Sherbakoff became head of plant pathology and Dr. Simon Markovitch became head of the entomology section. Both groups made significant contributions to Tennessee and national agriculture through research but had no teaching responsibilities. Teaching programs for entomology and plant pathology remained in the departments of botany and zoology on the main campus.

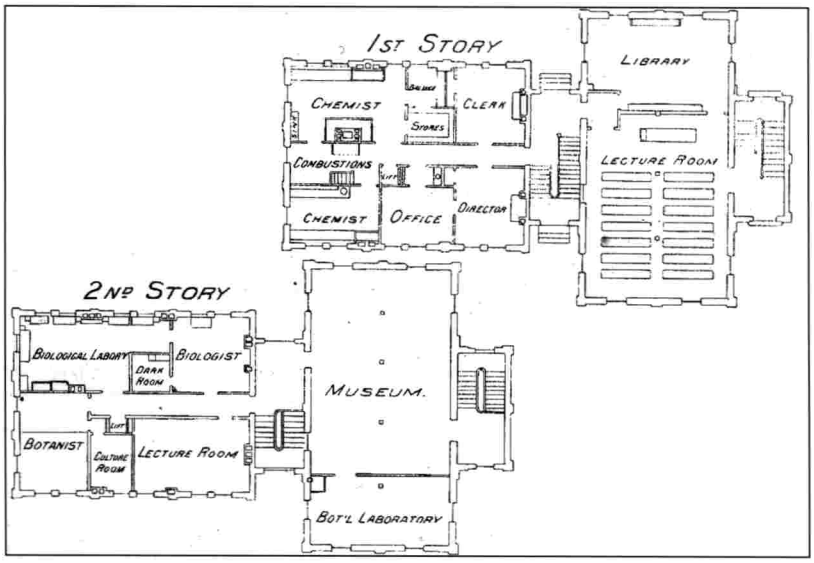


Prof. Samuel Essary



Frank Lamson-Scribner

In 1964 two courses taught in the College of Liberal Arts were assumed by the College of Agriculture. One undergraduate course, economic entomology (Zoology 221), was taught by the entomology department and introductory



The first Morrill Hall (later called Carrick), circa 1888, complete with laboratories, offices, a library, a darkroom, and a museum. Lecture rooms could be darkened for use of "magic lantern" presentations in teaching. The building burned in 1942.

plant pathology (Botany 313) was assumed by the plant pathology department.

Upon the retirement in 1964 of Dr. J.O. Andes, head of plant pathology, the Experiment Station departments of entomology and plant pathology were combined and named agricultural biology. Dr. Selmon E. Bennett was head of the new department.(4)

Bennett served as head from 1965 until February 1974. Dr. Carroll Southards was named head in March 1974. Dr. L.F. Johnson, who taught the plant pathology course in the botany department, transferred to the plant pathology section of the Experiment Station in 1955. For several years Johnson returned to main campus to teach the course in botany. Then botany surrendered the course to the department of agricultural biology and it was the only course in plant pathology to be offered at UT for nearly 75 years.

A second undergraduate course, plant nematology (later developed into a graduate course), was organized and taught in 1969 by Dr. Southards, who had joined the agricultural biology faculty in 1965. Dr. J.H. Hilty, a pathologist, also came to the department in 1965 and shared the responsibility of reaching the introductory course. Dr. Charles Pless was hired in 1966 and assumed teaching of the economic entomology course, then agricultural biology 321. In 1967 Dr. Elvis Heinrichs joined the entomology faculty.

By 1972 seven faculty, three entomologists and four plant pathologists, were teaching an average of 15 percent of their paid time. Six courses, two graduate and four undergraduate, were offered. These were: introductory plant pathology, biology of soil organisms, plant parasitic nematodes, plant disease control, economic entomology, and forest and shade tree insects.

A total of 346 students were enrolled in one or more course in the 1969-70 academic year. Although there was no curriculum leading to a degree at that time, five graduate students served as research assistants and were directed by the agricultural biology faculty. Their degrees were awarded in liberal arts departments such as botany or zoology.

In 1968 the department moved into Ellington Plant Sciences Building. In addition to offices for faculty and staff, there were five research laboratories, a preparation room, and one large teaching laboratory.

Dr. Heinrichs left the department to join the U.S. Agency for International Development project in India in 1970. Dr. Dale Haws was added to the faculty in 1972 as a veterinary entomologist and developed a course by that title. He was replaced in 1973 by Dr. Reid Gerhardt.

MASTER'S DEGREE OFFERED

In 1972 the department was granted a master's degree program in agricultural biology.(6) Although additional funding was not available, additional courses were slowly added to complete a curriculum including: methods of research, insect pests of man and animals, insects of field and horticulture crops, special problems in economic entomology, special problems in plant pathology, seminar and thesis.

Additions have been made to the curriculum over the years including: forest protection, plant disease fungi, physiology of plant disease, veterinary entomology and virology.

In the mid-70s graduate enrollment averaged about 20. As enrollment in the college declined, graduate enrollment also declined. For several years it ranged from 11 to 14, but reached 22 in 1993. Nine of the students were women.

SELMON BENNETT SEMINARS

The Institute of Agriculture participated in a university-wide fundraising campaign around 1972. During this time, Selmon Bennett pledged $1,000 a year for ten years to establish an endowment for a special seminar series. Upon his death, his wife, Christine, continued the endowment payments until it was mature at $10,000.

The Selmon Bennett Seminars Fund provides support to bring in noted speakers to present seminars and to interact with students and faculty.

NAME CHANGED

In 1980 the name of the department was changed from agricultural biology to entomology and plant pathology. This change was significant since it allowed faculty to be associated with a department with an identity that matched their particular discipline and greatly improved the morale of the faculty, staff, and students.

STUDENT ACCOMPLISHMENTS

The Entomology and Plant Pathology Graduate Student Association was formed in 1976. Students bought bulk honey and extracted and processed it for sale annually to provide funds for student travel to professional meetings. More recently the association has collected old books to sell for fund raising. They also designed and marketed T-shirts.

Several M.S. graduates went on for Ph.D. degrees and have taken their places in responsible positions.

Dr. Brad Mullins is associate professor of entomology at the University of California, Riverside.

Dr. Russell Coleman is a veterinary entomologist on the staff of Walter Reed Hospital in Washington with the rank of captain in the U.S. Army.

Dr. Lavone Lambert is professor of entomology with the United States Department of Agriculture, Stoneville, Miss.

Dr. Philip Hunter is superintendent of the Tobacco Experiment Station, Greeneville, Tenn.

Dr. Edward Cherry is product manager, FMC Corporation, Cherry Hill, New Jersey.

Dr. Terri Niblack is an assistant professor of plant pathology at the University of Missouri. Niblack was the first female student at the university to enroll in courses in agricultural education to become a certified teacher of horticulture. After teaching at Farragut High School in Knox County, she obtained the M.S. degree in plant pathology at UT.

Many other graduates terminated at the end of their M.S. program. A few of these successful graduates are Neil Ogg, pesticide coordinator, Clemson University; Elizabeth Long, state diagnostician, UT Agricultural Extension Service, Nashville; and James Keener, Tennessee Department of Agriculture, Knoxville. Three graduates went on to medical school: Dr. Marshall Priest, a cardiologist in Boise, Idaho; Dr. Pedro Jones, a dentist in Charleston, SC; and Dr. Joe Simpson, a dentist in Lenoir City, Tenn.

These are but a few of the professional accomplishments of graduates in the program.

By the early 1990s, the department had 11 faculty with teaching appointments, compared to four or five when the master's program started. This reflects growth of the faculty and their specialization. These include a medical and veterinary entomologist, an insect ecologist with integrated pest management (IPM) specialization, a disease physiologist, a virologist, an epidemiologist, and a bacteriologist.

FACULTY OF ENTOMOLOGY AND PLANT PATHOLOGY

Professors	Years of Service	Specialty
F. Lamson-Scribner*	1888-1894	Plant Pathology
Samuel Bain*	1893-1920	Plant Pathology
Samuel Essary*	1904-1920	Plant Pathology
Harcourt Morgan**	1904-1933	Entomology
G.M. Bentley**	1905-1949	Economic Entomology
H.R. Hesler***	1919-1958	Plant Pathology
Leander Johnson**	1964-1991	Soil Microbiology
Selmon Bennett****	1964-1974	Plant Pathology
Howard Reed	1964-1984	Plant Pathology
James H. Hilty	1965-	Plant Pathology
Carroll Southards****	1965-	Plant Pathology
Charles Pless	1966-	Entomology
Elvis Heinrich	1967-1972	Entomology
Dale Haws	1972-1973	Entomology
Reid Gerhardt	1973-	Entomology
Paris Lambdin	1974-	Entomology
Ernest Bernard	1977-	Plant Pathology
Michael McLaughlin	1979-1982	Plant Pathology
Jerome Grant	1985-	Entomology
Mark Windham	1985-	Plant Pathology
Kimberly Gwinn	1987-	Plant Pathology
Bonnie Ownley	1992-	Plant Pathology

* Taught in the School of Horticulture and Botany
** Taught in School or College of Agriculture & in Liberal Arts
*** Taught in College of Liberal Arts
**** Served as Head of the Department of Entomology and Plant Pathology

REFERENCES

1. *The University of Tennessee Register*, Vol. 7, No. 1, 1904.
2. *The University of Tennessee Register*, Vol. 8, No. 3, 1905.
3. *The University of Tennessee Record*, Vol. 67, No. 3, 1964.
4. *The University of Tennessee Graduate Catalog*, 1972-73.

CHAPTER XII

FOOD SCIENCE AND TECHNOLOGY

The teaching of food science in the College of Agriculture started as early as the 1890s with dairy husbandry, which included dairy products, a part of the general course in agriculture. Although research was conducted on food in the departments of agricultural chemistry and food chemistry for many years, there were no courses in food technology.

Beginning in 1946 an undergraduate course in food preservation was offered in the department of horticulture and forestry. A second course was added later. These two courses, taught by Dr. Jack Garner, were continued until the new department of food technology was formed.(1)

During 1947-49 the Food Technology Building, named McLeod Hall in 1970, was constructed. This building was considered one of the most modern of its type in the country at that time. Facilities were available for the study and processing of meats, poultry, fruits, and vegetables. McLeod was used for food research under the food chemistry department until a new department was formed.

FOOD TECHNOLOGY

A Department of Food Technology was authorized in 1958, when the University of Tennessee became the 13th state to have such a program. Dr. M.R. Johnston was named department head in 1959. The department was limited to research until the master's degree program was approved in 1962. The first M.S. degree was conferred in 1963. Forty-five students received the M.S. degree in food technology from 1963 through 1972.(2)

Dr. Richard Gernon was on the teaching faculty from about 1960 until 1965 when Dr. J.L. Collins joined the faculty and, along with Dr. Johnston, taught the first courses in food technology. An undergraduate curriculum was approved in 1958 and two students received the B.S. degree in 1962. Professor Ivon McCarty, who had been in food research before the Department of Food Technology was formed, taught undergraduate courses from 1968 to 1972 before transferring to Extension activities of the new Department of Food Technology and Science.

"An undergraduate curriculum was approved in 1958 and two students received the B.S. degree in 1962."

FOOD TECHNOLOGY AND SCIENCE

On May 30, 1972, Dr. Webster Pendergrass, vice president for agriculture, announced that a new department, food technology and science, would be formed by merging the processing phases of four other departments: animal husbandry-veterinary science, dairying, poultry, and food technology. Dr. J.T. Miles, then head of dairying, was appointed to head the new department.(3) He served until his retirement in 1985.

The structure of the new department provided for program expansion, improved coordination, increased efficiency, and greater opportunities for students. Work was oriented to the food industry rather than farm production.

TEACHING FACULTY OF FOOD TECHNOLOGY AND SCIENCE

Professor	Period of Service	Specialty
W.R. Backus*	1972-1973	Meat Science
R.N. Biswal	1987-1993	Food Engineering
E.A. Childs	1973-1976	Toxicology
G.E. Christen	1986-	Food/Dairy Chemistry
J.L. Collins	1972-	Food Processing
S.D. Cunningham	1977-1978	Food Processing
P.M. Davidson	1979-1991	Food Microbiology
G.W. Davis	1977-1980	Meat Science
B.J. DeMott	1972-1990	Dairy Products
F.A. Draughon	1979-	Food Microbiology
D.A. Golden	1993-	Food Microbiology
H.O. Jaynes	1972-1993	Department Head
M.R. Johnston	1972-1973	Fruits & Vegetables
H.D. Loveday**	1983-	Meat Science
C.C. Melton**	1972-1983	Meat Science
S.L. Melton	1973-	Food/Flavor Chemistry
J.T. Miles	1972-1985	Head, Dairying
J.R. Mount	1978-	Food Processing
J.O. Mundt	1972-1978	Food Microbiology
W.W. Overcast	1972-1980	Dairying
M.P. Penfield	1986-	Sensory Evaluation/Bakery
M.J. Riemann	1975-1992	Meat Science
O.G. Sanders	1977-1985	Sensory Evaluation

* *To Animal Science*
** *To Extension*

Faculty members with primary interests in food processing were assigned to the new department. These included: M.R. Johnston and J.L. Collins from food technology whose interests were fruits and vegetables; Curtis Melton and William Backus who transferred from animal husbandry-veterinary science to work with meats; and Bobby J. DeMott, Hugh Jaynes, and W.W. Overcast from the department of dairying. Dr. Jaynes later became head of food technology and science upon the retirement of Dr. Miles.

Formation of the new department required that curricula be developed for B.S. and M.S. degree programs. The B.S. curriculum was and has remained a program that meets the educational guidelines of the Institute of Food Technology. Core courses addressed foods in general and were not tied to particular classes of food. Courses dealt with the science and technology of particular food groups.

Before the new department was formed, a doctoral program was conducted under an interdisciplinary program of animal products with primary leadership coming from animal husbandry-veterinary science. A doctoral program was not offered in the area of plant products at that time.

After approval of the new undergraduate and master of science degree programs in food technology and science, planning began for a Ph.D program in order to allow candidates to study and conduct research in both plant foods and animal products. A proposal for a Ph.D. program was drafted in 1974, approved by the College of Agriculture and forwarded to the graduate school. After many revisions the program became active in the fall quarter of 1981.

Revisions were made in the B.S. degree program in 1978 and 1982 and, along with all other departments, major revisions were made for the transition from the quarter to semester system in 1988. Organization of the new semester courses was complex as certain subject matter had to be incorporated with very different subject areas.

The number of undergraduate students in the department since 1972 has ranged from 24 to 66. In the fall of 1989, there were 47 undergraduates, almost equally divided between men and women. Nineteen of these were African-American. The number of graduate students has varied from 18 to 46. The number of all degrees granted during the 1972-1989 period is shown in the table below.

In 1972 the faculty consisted of nine men and no women. By 1990 the total was 12, four of whom were women. At the end of 1989 there were 28 salaried employees, including support staff, in the department. The teaching faculty is listed in the table at left.

Excellence in teaching is evidenced by several teachers receiving awards and holding positions of leadership. Professors Davidson, C. Melton, and Jaynes have been president of the Gamma Sigma Delta honor society. Jaynes was president of the local chapter of Sigma Xi and Dr. Marjorie Penfield served as president of Phi Kappa Phi, a campus-wide honor society. Awards to the food science and technology faculty for teaching are included in the chapter on faculty honors and awards.

International agriculture has been of interest to the food science faculty. They have visited foreign universities and attended conferences in countries including

FOOD TECHNOLOGY & SCIENCE DEGREES

Year	B.S.	M.S.	Ph.D.
1972-73	2	7	4
1973-74	9	5	2
1974-75	8	4	1
1975-76	8	14	0
1976-77	11	11	2
1977-78	17	3	0
1978-79	17	9	3
1979-80	19	16	1
1980-81	15	6	0
1981-82	19	9	3
1982-83	18	7	4
1983-84	16	7	1
1984-85	11	4	0
1985-86	9	10	3
1986-87	10	10	0
1987-88	14	8	2
1988-89	10	11	3
Total	**213**	**141**	**29**

Germany, Switzerland, England, Cameroon, Thailand, Singapore, Brazil, Turkey, China, Canada, Japan, and Egypt. The purpose of such trips is to exchange research information. However, they are also of great value in the improvement of teaching of food science and technology and in arranging for foreign students to come to the University of Tennessee for graduate studies.

In August 1992, the name of the department was changed from Food Technology and Science to Food Science and Technology. The new name more accurately reflected the teaching mission of the department.

FOOD SCIENCE & TECHNOLOGY ENROLLMENT

	Undergrad.	Graduate
1972	28	31
1973	33	18
1974	31	24
1975	40	28
1976	49	23
1977	66	28
1978	61	35
1979	66	37
1980	54	33
1981	61	32
1982	49	23
1983	39	22
1984	24	26
1985	29	36
1986	35	41
1987	50	46
1988	49	43
1989	47	35
1990	54	25
1991	48	33
1992	52	28



McLeod Hall, the food technology building, was constructed between 1947 and 1949. Considered one of the most modern of its type in the country at that time, facilities were available for study and processing of meats, poultry, fruits and vegetables. McLeod connects to Brehm Animal Science.

REFERENCES

1. *The University of Tennessee Record*, Vol. 49, No. 1, May 1946.
2. *Graduation Statistics*, Office of Graduate Admissions and Records, 1989.
3. *The University of Tennessee Record*, Vol. 76, No. 1, Jan. 1973.

CHAPTER XIII

FORESTRY, WILDLIFE AND FISHERIES

As late as 1897 the study of forestry in American colleges consisted only of lectures on dendrology and forest geography. This instruction usually was in connection with courses in botany. Some horticulture courses included the production of ornamental trees and management of farm woodlots.

At a meeting of the American College Association in 1905, a resolution was passed urging more education and experimentation in forestry. In 1898 only 11 persons were employed in the U.S. Division of Forestry. The number had increased to 821 in 1905 and to 2,012 in 1909. This rapid expansion in forestry jobs resulted in a much greater interest in forestry instruction in educational institutions. In 1907 the number of students enrolled in 4-year forestry courses in the United States was 114 and the number in short courses was 79. The number of 4-year courses had increased to 449 and to 411 in short courses by 1911.(1)



By 1956, forestry was still a two-year pre-professional program. Faculty in horticulture and forestry included only one in forestry. (from left) R.C. Anderson, Brooks Drain, Troy H. Jones, F.W. Cooler (back) Ed Buckner (professor of forestry) Homer Swingle, Roger B. Thompson, J.S. Alexander, and B.S. Pickett.

The first professional school of forestry was started at Cornell University in 1898. A private school was started at Biltmore, North Carolina, at about the same time. The next year a forestry school was started at Yale University. The latter two programs were endowed by the family of Gifford Pinchot, who became the head of the Forestry Division of the United States Department of Agriculture. By 1911 there were undergraduate forestry programs also at 11 land-grant institutions and graduate programs at Yale, Harvard, and Michigan.(2)

Two courses in forestry were offered as early as 1904 in the department of agriculture at the University of Tennessee. Forestry was taught in 1910 in the department of horticulture and forestry. One course in general forestry was taught by Prof. Keffer and later by Prof. Watson. This course and the farm forestry course that followed were required courses for

some agricultural students and electives for others. The 1930 *University Register* does not include forestry in the department name and apparently no courses were taught.(3)

In 1934, UT President James Hoskins recommended that a two-year curriculum in forestry be approved. He assured UT trustees that the Tennessee Valley Authority would aid in this program and that no additional outlay of funds would be necessary. The next year several new courses were added to the curriculum.

Prof. Henry Dorr joined the department of horticulture in 1936 and taught all the forestry courses.(4) A pre-forestry curriculum was developed by 1940. Students who desired a degree in professional forestry selected the pre-forestry curriculum and then transferred to a professional forestry school. The 1940 curriculum included nine hours of forestry, three hours of agronomy (soils), three hours of agricultural engineering, six hours of civil engineering, and the remaining hours in liberal arts.(5)

By 1945 six forestry courses were offered. They included: general forestry; farm forestry; dendrology and wood uses; forest mensuration; seeding, planting, and erosion control; and conservation. These courses continued until 1949, when the department was renamed horticulture and forestry. Thereafter, forestry courses carried a forestry designation rather than horticulture so students could transfer to a professional program without loss of academic credit.

A number of instructors taught forestry in the department of horticulture and forestry, including Edward Clark, Elvis V. Hunt, and Edward Buckner (See the chapter on horticulture for their dates of service).

In 1960, the state began paying $200 per year toward the tuition costs of Tennessee residents enrolled as juniors or seniors in forestry at Auburn University, North Carolina State University, or the University of Georgia. This practice was discontinued in 1965 after the forestry department was formed at UT.(6)

FORESTRY DEPARTMENT

In December 1963 Governor Frank Clement announced the establishment of a four-year professional degree program in forestry at UT. Planning began immediately on the junior-year curriculum, which was first offered in the 1964-65 school year. The first head of the Department of Forestry, Dr. Jack Barrett, was appointed on September 1,1964.

A four-year curriculum in forest resource management leading to the bachelor of science in forestry degree was approved by the spring of 1965. This program was accredited by the Society of American Foresters in 1969, reaccredited in 1975, and again in 1980, 1985, and 1990.

A master of science with a major in forestry was approved by the UT Graduate Council in 1966. The number of M.S. degrees, in forestry granted between 1966 and 1989 was 117. A masters degree in wildlife management was approved in 1970 and changed to wildlife and fisheries science in 1974. The department was renamed the Department of Forestry, Wildlife, and Fisheries in 1977; this new designation more accurately reflected the total activities of the department.

Following the retirement of Barrett in June 1977, Dr. Gary Schneider was selected as department head. Later that year Dr. James Byford was named to the new position of associate head. In October 1985, Schneider became associate dean of the college of agriculture. Byford became acting head of the department and remained in the position until October 1986 when Dr. George Weaver assumed the position permanently. Byford was named dean of agriculture at UT Martin. After Dr. Weaver's death in 1993, Dr. John Rennie was named acting head in 1994 prior to the appointment of

FORESTRY, WILDLIFE & FISHERIES TEACHING FACULTY

Professor	Years	Specialty
John Barrett	1964-1977	Head, Silviculture
Edward Buckner*	1964-	Silviculture
Eyvind Thor	1964-1982	Forest Genetics
Kerry Schell	1965-1990	Forest Policy & Recreation
Garland Ray Wells	1965-	Forest Economics
Fred Emerson	1965-1966	Wildlife Biology
Harold Core	1966-1981	Wood Products
Ralph W. Dimmick	1966-	Wildlife Biology
Michael Pelton	1968-	Wildlife Biology
Frank Woods	1969-1991	Forest Ecology
John Rennie	1970-	Forest Biometry
J. Larry Wilson	1970-	Fish Biology
David Ostermeier	1971-	Forest Economics & Policy
Ronald Hay	1973-	Silviculture
Boyd Dearden	1974-	Wildlife Biology
Gary Schneider**	1977-1985	Head, Silviculture
William Hammitt	1978-1990	Forest Recreation
Richard Strange	1978-	Fish Biology
Robert Little	1979-	Wood Products
Edward Dougal	1982-1984	Wood Products
Scott Schlarbaum	1984-	Forest Genetics
Paul Winistorfer	1985-	Wood Products
James Byford	1985-1986	Acting Head
George Weaver	1986-1993	Head, Forest Ecology
David Buehler	1991-	Wildlife Management
J. Mark Fly	1992-	Wildland Recreation
George Hopper	1994	Department Head

** See Horticulture for prior service*

*** Associate Dean of College beginning 1985, Acting Dean 1993*

Dr. George Hopper as department head.

The M.S. degree in wildlife management, later wildlife and fisheries science, was first offered in 1970. A B.S. degree was added to the program in 1973. The department has occupied a portion of the second floor of Ellington Plant Sciences Building since its construction in 1968. Previously the offices of the department were in what is now known as Plant Sciences Annex B. New dormitories and classroom facilities were constructed for forestry field teaching sessions at Ames Plantation near Grand Junction, Tennessee, in 1968.

Dr. Harold Core retired in 1981 after 15 years of service in the development of education in wood sciences and wood utilization. Dr. Eyvind Thor retired in 1982, having served as teacher and researcher of genetics and tree improvement since 1959, long before the department was organized. His research and teaching about American chestnut, pines for fiber and Christmas trees made important contributions. Mr. James Warmbrod retired in 1982 after 33 years of service. Although his duties were as extension forester stationed at Jackson, he assisted in teaching the field courses at Ames Plantation. Dr. Frank W. Woods came to the department from Duke University in 1968. He not only taught undergraduate and graduate courses in forest ecology and watershed management, but was also a member of the graduate program in ecology, where he supervised numerous M.S. and Ph.D. students. Following his retirement in 1991, he joined a World Bank program in January 1992 to develop a forestry school in Ethiopia.

Enrollment in the department during selected years was as follows:

	1965	1968	1975	1980	1985	1990
Undergraduate	115	159	371	172	188	215
Graduate	—	12	38	19	28	29

By 1994, UT's forestry department offered 28 undergraduate courses and 14 graduate courses. There were three major areas of concentration. Forest resources management includes forest business management, forest biology, forest economics, forest inventory, forest recreation, and wildlife management. A second concentration, wildland recreation, provides an education in the management of public lands. The wood utilization concentration offers instruction in the business and engineering aspects of using forest products.

The wildlife and fisheries curriculum offers programs in the science and art of maintaining populations of animals for the best interest of the wild species and for the public. (7)

REFERENCES

1. Alfred C. True. *A History of Agricultural Education in the United States, 1785-1925.* United States Department of Agriculture, Misc. Pub. No. 36, 1929.
2. See No. 1.
3. *The University of Tennessee Record.* Vol. 7, No. 2, May 1904.
4. *The University of Tennessee Record.* Vol. 39, No. 1, Jan. 1936.
5. *The University of Tennessee Record.* Vol. 43, No. 3, May 1940.
6. *The University of Tennessee Record.* Vol. 64, No. 1, Jan. 1961.
7. *The University of Tennessee Undergraduate Catalog,* 1993.

CHAPTER XIV
HORTICULTURE

Horticulture and botany were often closely associated in agricultural colleges in the early days. The first agricultural colleges to develop horticulture as separate courses were those in Michigan in 1867, New York in 1874, and Ohio in 1876.(1)

Horticulture was apparently taught very early in the history of the East Tennessee University, soon after it became a land-grant institution. The 1874-75 catalog gives a general statement on the School of Agriculture, Horticulture and Botany.(2) In the course Practical or Applied Agriculture in 1879-80, one of the subjects taught was "orchards." The course in horticulture included:

> "formation and management of the fruit, vegetable, and flower garden, soils, manures, hot-beds, cold frames and pits, garden implements, propagation of plants, pruning, training and transplanting, mulching and watering, protection from frost, insects and culture of fruits and vegetables."

The course leading to a of bachelor of science degree in agriculture required 2400 total hours of instruction and included 80 hours of horticulture in addition to 200 hours of scientific and practical agriculture. By order of the UT board of trustees, two lectures in horticulture along with other agricultural lectures were also required of all candidates for any degree from the university. All classes in agriculture, horticulture, and botany were taught by Prof. John M. McBryde, the second professor of agriculture at UT.(3)

The 1879-80 catalog mentions "an orchard of more than 100 varieties of apples and peaches — a fruit garden — a vineyard, and a nursery of 5,000 trees and shrubs." Facilities for teaching horticulture included "a greenhouse filled with a small but choice collection of plants, and a flower garden, both on College Hill." Two horticulture text books are listed in the catalog: *Lindley's Horticulture* (with notes by Gray and Downing) and *Henderson's Practical Floriculture.*

Horticulture was taught by Prof. John M. Glenn from 1882 to 1887. Frank Lamson-Scribner, a graduate of Maine State College, was professor of botany and horticulture from 1887 to 1889.

In 1890 R.L. Watts came to UT as associate professor of horticulture and horticulturist for the Experiment Station.(4) He improved the small existing orchard and vineyard by planting more adapted varieties for both teaching and research. Watts resigned in 1899 to become dean and director at Pennsylvania State College.(5)

Prof. Charles Keffer became head of the horticulture department in 1899. Keffer had been associated with agricultural colleges in Minnesota, South Dakota, New Mexico, and Missouri, and prior to coming to UT he was assistant chief of the forestry division for the U.S. Department of Agriculture.(6) Keffer added courses in forestry to the program in horticulture. In fact, the department was called horticulture and forestry for many years until a separate department of forestry was organized in 1964.

Keffer did most of the teaching of horticulture and forestry as well as the research and extension activities in these areas until he became the first director of the Tennessee Agricultural Extension Service in 1914. He is best known for his extension contributions, but he was also a very popular

teacher for about 15 years and a friend of the students.

Before about 1908, relatively little attention was given to vegetable production in most of the agricultural colleges. The first college textbook on the subject, *Bailey's Principles of Vegetable Gardening,* had been written in 1901. There probably were not more than four or five vegetable specialists in the country in 1908.(7)

When Keffer became director of the Extension Service, Oscar M. Watson succeeded him as department head. During these early years the department occupied space in the basement of Morrill Hall and shared classrooms with the other two departments, agronomy and animal husbandry. Like others before him, Watson had responsibilities in research, extension, and the improvement of the university grounds.(8)

In 1916 Cherokee Farm, across the river from the university farm, was taken over by the College of Agriculture. After the best land was selected by other departments, the steep hillside facing the river was allotted to horticulture, mainly for a teaching laboratory. An old fruit farm on Middlebrook Pike was also used for teaching. Watson did most of the horticulture work. However, he had one student assistant who was paid $50 each spring term to assist in the expanding program.(9) Watson was also responsible for the final grading and planting of grass on the new Shields-Watkins Field.(10)

In 1923 Dr. Neal D. Peacock, who received the Ph.D. from Michigan State University and been employeed by the University of Georgia, was selected as head of the department. Peacock held this position until 1950 when he became vice director of the college. From 1943 to 1950 he was both head of the department and vice dean of the college for resident instruction.(11)

Course offerings were greatly increased during Peacock's tenure. In the beginning he taught many of the courses in fruits, vegetables, and farm and home beautification. Students remember him as a well-organized teacher, and a very tough, no-nonsense and stern professor. One story often repeated by former students had its setting in the orchard. Students were learning to prune peach trees and one student cut off an especially large limb, stuck it in the ground, and then gave it a severe pruning. Peacock gave the student a stern lecture on how not to prune.

Peacock was known for his efficiency and no doubt had to be because he greatly expanded the orchard and vineyard, made numerous university grounds plantings, many of which beautify the campus to this day, and made extensive plans for a greenhouse and other facilities during the Depression so they could be built when money became available later.

Prof. A.B. Strand came to the department from Michigan State College in 1935 and took over teaching of the vegetable courses. Many former students recall him as hard worker. His lectures usually began with "Now, fellows..." The number of faculty slowly increased over the years:

- Prof. Henry Dorr became the first trained forester to teach forestry courses in 1936.
- Prof. Arthur Meyer joined the department in 1936 and taught many of the vegetable courses.(12)
- Dr. Arthur Mitchell came as a fruits specialist in the late 1930s, and trained the first fruit judging teams.
- Prof. Troy Jones came to UT in 1945 to teach fruit courses and coached the fruit team for several years. He later oversaw the winter short course program as assistant to Peacock while he was vice-dean.
- Prof. Robert Anderson came in 1946 and taught general horticulture courses until 1961. He was later in charge of the horticultural program at Hiwassee College.
- Prof. Homer Swingle joined the department in 1948 as a teacher of vegetable physiology and production. He con-



(Standing L-R) Horticulture faculty B.S. Pickett (department head) and H.D. Swingle visit with researchers P.H. Parham and W.E. Roever at a Horticulture Field Day about 1961

Professor Strand's lectures usually began with "Now, fellows..."

tinued in the department until the teaching of vegetables was transferred to plant and soil science in 1972.

- Prof. Joe Alexander, who had been on the faculty at UT Martin, came to Knoxville in 1949 to teach ornamental horticulture.
- Dr. B.S. Pickett, a Canadian fruit specialist, replaced Peacock as department head in 1950 and held that position until 1972 when all courses in vegetables and fruits were transferred to the new plant and soil science department.
- Dr. James Pointer served as manager of the horticultural farm and instructor in the department from 1951 to 1953. He also served with the Extension Service in Knox County from 1963 to 1970. He was an ornamental specialist in the department from 1970 to 1972 and then in the ornamental horticulture and landscape design department.

Several other faculty in the department, most of whom were teachers of forestry or ornamental horticulture, are mentioned in the chapters on forestry and ornamental horticulture and landscape design.

The number of horticulture courses increased, especially following World War II. During the academic year 1946-47, 15 courses were offered. Two years later the number was 24. Many of the new courses were in ornamental horticulture, including plant materials, nursery management, landscape gardening, and landscape design. By 1952 nine courses were offered in ornamental horticulture.(13)

Courses in forestry had increased to eight by 1952 and a program in pre-forestry was organized to prepare students to transfer to other schools to complete their forestry degree at institutions with four-year programs.

A master's degree in horticulture was approved in 1905. Two master of science degrees in agriculture with a major in horticulture were awarded in 1914 to John Francis Voorhees and DeWitt T. Hardin. Only four master's degrees were conferred between 1920 and 1942, 25 between 1943 and 1965, and 17 more from 1966 until 1972.

The great interest in forestry and ornamental horticulture led to the development of new departments. The Department of Forestry was established in 1964. Ornamental horticulture and landscape design became a separate department in 1972 when fruit and vegetable programs were transferred to the newly formed Department of Plant and Soil Science.(13)

The teaching faculty of horticulture from 1887 to 1972 and forestry from 1887 to 1964 are listed in the table at right.

The teaching programs in the department were led by Professors Scribner, Watts, Keffer, Watson, and Peacock. The faculty was usually small but effective. Most had many responsibilities in the Experiment Station as well the landscaping and beautification of the entire campus.

HORTICULTURE AND FORESTRY TEACHING FACULTY

Professors	Years	Specialty
F. Lamson-Scribner	1887-1889	Horticulture/Botany
R.L. Watts	1890-1899	General Horticulture
Charles Keffer*	1900-1914	General Horticulture
O.M. Watson	1914-1922	General Horticulture
Neal Peacock*	1922-1950	Horticulture & Head
A.B. Strand*	1928-1938	Vegetable Production
Henry Dorr	1935-1948	General Forestry
Authur Mitchell	1937-1947	Fruit Production
Arthur Meyer*	1938-1950	Vegetable Production
Troy Jones	1945-1967	Fruit Production
Robert Anderson	1946-1961	General Horticulture
Homer Swingle*	1948-1972	Vegetable Physiology
Fred Galle	1948-1953	Ornamentals
Edward Clarke	1948-1952	General Forestry
Jack K. Crum	1949-1952	Food Preservation
B.S. Pickett*	1950-1972	Fruit Production,Head
Ellis V. Hunt	1952-1956	General Forestry
Joseph Alexander**	1950-1972	Plant Materials
Alfred C. Koelling	1952-1955	Ornamentals
Roger Thompson	1954-1968	Landscape Gardening
Edward Buckner*	1957-1964	General Forestry
H. van de Werken*	1960-1972	Landscape Design
David Coffey*	1967-1972	Vegetable Physiology

** Served in other departments/positions during other years*

*** In commercial work 1952-56*

REFERENCES

1. Alfred C. True. *A History of Agricultural Education in the United States,* 1875-1925. United States Department of Agriculture. Misc. Pub. No. 36, 1929. U.S. Printing Office.
2. *East Tennessee University Register and Catalog*, 1875-77.
3. *East Tennessee University Register and Catalog*, 1879-80.
4. *University of Tennessee Register and Catalog*, 1890
5. Ruth Williams. History of the Horticulture Department, *The Tennessee Farmer*, Vol XXX, No 7, April, 1937.
6. *University of Tennessee Register and Catalog,* 1900.
7. See 1 above.
8. See 5 above.
9. *University of Tennessee Record,* 1916.
10. See 5 above.
11. *University of Tennessee Record,* 1950.
12. *University of Tennessee Record,* 1937.
13. *University of Tennessee Record,* 1952.
14. Diana Crisp Lopez,. *Graduate Education at Tennessee: An Historical Perspective.* The Graduate School, University of Tennessee, Knoxville, 1990.

CHAPTER XV

ORNAMENTAL HORTICULTURE AND LANDSCAPE DESIGN

EARLY ORNAMENTAL HORTICULTURE

Ornamental horticulture has been an important part of UT programs since before the turn of the century. In 1879 one of the textbooks listed for agriculture was Henderson's *Practical Floriculture.* Landscape gardening was mentioned in the 1880-81 catalog as part the horticulture course. Prof. John McBryde taught most of agriculture classes in those early years.(1)

From the earliest days, professors of agriculture and horticulture were responsible for landscaping campus grounds. Among the faculty who undertook this task were Professors Watts, Watson, Keffer, Strand, and Peacock.

A single course in floriculture and landscape gardening was in the curriculum in 1904-05 (2) and landscape gardening was offered in the horticulture department in 1910, 1920, 1930, and 1940. A course in farm home improvement was offered for many years, beginning about 1940, as either a required course or elective in most agricultural curricula. Peacock taught the course for many years. During a meeting of agriculturalists in connection with UT's centennial in 1944, Dr. C.E. Brehm, dean of the College of Agriculture, asked for serious consideration of adding a floriculture course for the horticulture department.(3)

Prof. Fred Galle was apparently the first true orna-mentalist in the Department of Horticulture. He taught courses in woody ornamentals from 1949 until 1953. Students liked to relate a story about Galle: He was camping overnight in the Smoky Mountains, studying the native azaleas, when a black bear raided the camp and ate all the notes for his doctoral dissertation. Galle later left UT to become director of horticulture at Callaway Gardens in Pine Mountain, Georgia. His collection of azaleas and hollies, as well as the outstanding conservatory at Callaway, are well known.

"From the earliest days, professors of agriculture and horticulture had responsibility for landscaping campus grounds."

By 1950, nine courses offered in ornamental horticulture were available, including general floriculture; three courses in plant materials covering the culture, identification and adaption of deciduous shrubs, broadleaf evergreens, and narrowleaf evergreens; a course in arboriculture; landscape design; and nursery management.

Alfred C. Koelling taught in the department from 1952 to 1955. His special interest was floriculture. In 1954 Prof. Roger Thompson was hired to teach courses in landscape gardening and to supervise ornamental plantings on the UT campus. He retired in 1964.

DEPARTMENT ESTABLISHED

In the 1960s and 70s, a new environmental awareness in America led to more interest in home and landscape improvement. Many families were more affluent and developed more extensive and costly landscapes and greater interest in good design and custom landscaping. Requests for landscape architectural services increased and more emphasis was placed on the use of landscape structures.

Popular gardening and home living books and maga-

zines promoted ornamental horticulture with articles and photographs on how landscaping fits into every aspect of good living. An increase in commercial landscaping came about as hotels, parks, and plazas were developed. Cities saw a rise in the development of large urban malls with extensive interior and exterior plantings.

As the ornamental industry expanded, educators realized that standard curricula offered by traditional horticultural departments were inadequate for training professionals in the expanding ornamental horticulture field. Urban students saw this area as a new and exciting program of study that was more to their liking than traditional farming and one that provided good job opportunities in several area of specialization.

In January 1972, through the leadership of Dr. Webster Pendergrass, vice president for agriculture, a new Department of Ornamental Horticulture and Landscape Design (OHLD) was formed. At the same time, the agronomy department and the fruit and vegetable sections of the old Horticulture Department were merged to form the Department of Plant and Soil Science. Faculty of OHLD consisted of four professors: Dr. Donald Williams, Prof. Joe Alexander, Prof. Hendrick van de Werken, and Dr. Lloyd Callahan.

Williams, a former student in the old horticulture department and extension specialist in ornamentals, became the head of the new OHLD department. He served in that position with distinction for ten years before transferring to teaching and research. Williams was well-recognized as a teacher, and was active in community beautification projects. Honors he received are reported elsewhere in this history.

Alexander came to the Department of Horticulture and Forestry in 1951 after four years at UT Martin Junior College. He stayed for about a year, then was employed by a commercial nursery, but returned in 1956 for a long career in both the old Horticulture Department and the OHLD Department. Alexander taught a number of courses including plant materials, plant propagation, and home-grounds management. He also was a member of the teaching team for plant science in agriculture, an introductory course offered with agronomy. Students said they liked his effective, down-to-earth and practical philosophy.

Callahan's primary responsibility was research with turfgrasses. He taught agrostology and turfgrass management and has supervised the research of many graduate students.

Hendrik van de Werken was educated in landscape design in the Netherlands and came to the United States in 1951. After serving at Virginia Polytechnic Institute for a number of years, he came to the UT Department of Horticulture and Forestry in 1958 to teach landscape design. Among his many successful graduate assistants was Dwayne Ingram,



The UT Trial Gardens have brought much positive attention to the Ag Campus. They are overseen by the Department of Ornamental Horticulture and Landscape Design, and are the site of All-American Selections testing.

who received the Ph.D. degree in plant and soil science and became dead of the Department of Horticulture at the University of Kentucky in 1990.

OHLD experienced a rapid increase in student enrollment following its formation in 1972. Because of increased enrollment and introduction of courses, new teachers were needed. Dr. Gary McDaniel came in 1973 as professor of floriculture. His courses in floral design and close relationships with students as an advisor contributed to his popularity with students. He published college textbooks in floral design and in ornamental horticulture. Among his many graduate students were Georgia Breshenham, who was one of the first to successfully make it in the garden center business.

Dr. Effin Graham came to OHLD in 1974 from the Atomic Energy Commission in Oak Ridge. He taught a very popular graduate course, histological microtechnique, and conducted the graduate seminar for many years. His expertise in cytological techniques made him a valuable consultant to graduate students and faculty.

In 1975 Dr. John Day was hired as a full-time teacher of nursery management, plant propagation, and plant materials. Several of his graduate students were involved in some of the earliest nursery economics studies at UT.

In 1976 Lee Abbott, who was an Air Force colonel and then personnel director at the State University of New York, graduated in OHLD and became a teaching assistant to Dr. McDaniel. He received the M.S. degree in 1979 and then became a full-time instructor of courses in landscape design, greenhouse management, and professional practices.

David Kendall, a graduate and a landscape architect, joined the faculty in 1979 as a full-time teacher of landscape design and related courses. His guidance and influence resulted in a number of students going on to obtain advanced degrees in landscape architecture and related studies. He

resigned in 1983 to form his own firm.

Enrollment in OHLD reached a peak of about 175 in the late 1970s. The number of women increased to about 45 per cent during this period. The job market for women in horticulture also changed from predominantly work in florist shops and garden centers to positions as landscapers, designers, propagators, horticulture sales, and managers. Several students returned to school after their children were grown or to begin second careers.

Many women were excellent students, often leading their classes academically. They provided a new dimension in classroom discussions. They led the OHLD Club to two outstanding horticulture club awards from the American Society of Horticultural Science, finished in first place individual competition categories in the Associated Landscape Contractors of America Student Competition several times, and generally promoted women in ornamental horticulture.

For many years curriculum for most agriculture students, including those in OHLD, required four basic agricultural courses including social sciences, animal science, plant science, and engineering. However, the OHLD faculty and students felt these courses focused so much on traditional agriculture that they were not relevant to the objectives of ornamental horticulture. The OHLD department was able to reduce the number of basic agricultural courses required in 1979, which allowed an increase in total hours of OHLD courses and resulted in the addition of specialized courses such as landscape design, construction, and contracting.

In 1982, when Dr. Williams returned to teaching and research, Dr. Douglas Crater became the new department head. Dr. Crater came from the University of Georgia where he had been an extension floriculturist, working with the flower and bedding plant industry.

In 1983, Susan Wilson Hamilton was hired as an assistant in floriculture research; however, as an instructor she has taught a number of courses including greenhouse management, professional practices, and interior plants. Hamilton earned B.S. and Ph.D. degrees at UT and the M.S. from Ohio State University. She has been a popular teacher and advisor.

Sam Rogers was hired in 1984 to teach landscape design and related courses. Rogers earned the B.S. degree with a major in plant and soil science from UT and an M.L.A. from the University of Georgia. He later became involved with the Saturn Project, a cooperative-educational project between OHLD and the General Motors Saturn automobile manufacturing plant at Spring Hill, Tennessee. In 1989 Rogers became the full-time coordinator of this project. Gary Menendez, an experienced commercial landscape architect with a local nursery, was hired to temporarily replace Rogers.

Several members of the faculty who were not on the teaching faculty of OHLD have made contributions to the academic program. Dr. James Pointer, a floricultural extension specialist, assisted the department in planning greenhouse facilities and was a strong promoter of the department across the state. Pointer came to UT in 1963 after a period of service with the Knox County Agricultural Extension Service.

Dr. Will Witte came to the department in 1977 as an extension specialist in woody ornamentals from the University of Florida. After a few years, he changed to full-time research. More recently he has taught a course in horticultural physiology and has been a graduate student advisor. One of his students, Sven Svenson, won second place in the student competition at the Southern Nurserymen Association Research Conference. Svenson subsequently earned a Ph.D. from Texas A&M and is on the University of Florida faculty.

In 1988, Dr. Peter Gresshoff filled the Racheff Chair of Excellence in the department. Although not on the teaching faculty, his research program in plant molecular biology has an impact on students, especially those working on advanced

TEACHING FACULTY IN ORNAMENTAL HORTICULTURE AND LANDSCAPE DESIGN

Professor	Years of Service	Specialty
Donald Williams +	1972-	Ornamentals
Joe Alexander ++	1972-1977	Plant Materials
Lloyd Callahan*	1972-	Turf Management
Hendrik van de Werken	1958-1988	Landscape Design
Rufus Rutland	1972-1973	Floriculture
Gary McDaniel	1973-	Floriculture
Effin Graham	1974-	Mutagenesis
John Day	1975-	Ornamentals
David Kendall	1979-1984	Landscape Design
Lee Abbott	1979-1984	
Shannon Smith	1978-1980	Ornamentals
Douglas Crater +++	1982-	Head
Susan Wilson Hamilton	1983-	Floriculture
Samuel Rogers	1984-	Landscape Design
Gary Menendez	1989-	Landscape Design
Teri W. Starman	1991-	Floriculture

\+ *Faculty of the Horticulture Department 1962-1972; head OHLD 1972-1982.*

++ *Faculty of the Horticulture Department 1950-1972*

+++ *Head of OHLD from 1982*

* *Faculty of the Agronomy Department 1964-1972*



Landscape construction classes, taught by Dr. Don Williams, built many structures to benefit the Ag Campus during the 1980s and early 1990s. Their projects included outdoor picnic areas, patios, terraces, and a gazebo.

degrees. The presence of Dr. Gresshoff and his staff added much to the prestige of the OHLD Department.

The master's degree in ornamental horticulture and landscape design was approved in 1972. A total of 54 M.S. degrees have been granted since that time. The department cooperates with other departments in granting a Ph.D. in plant science.

The department has offered an intern program in recent years. Interns work for three summer months with cooperating companies to obtain on-the-job experience. They also receive three hours of academic credit for this work. In 1991, 17 students worked in this program.

REFERENCES

1. *The University of Tennessee Register and Catalog*, 1880.
2. *The University Record*, 1904-05. Vol 10, No. 3. The University of Tennessee Press, 1904.
3. *The University of Tennessee Sesqui-Centennial*, 1794-1944. The University Press, Knoxville, Tennessee.
4. John W. Day, *A Brief History of Teaching in the Department of Ornamental Horticulture and Landscape Design, University of Tennessee, 1972-1990,* 1990.

CHAPTER XVI

AGRONOMY — PLANT AND SOIL SCIENCE

AGRONOMY

Agronomy probably was taught in a course by Prof. Hunter Nicholson, the first professor of agriculture at the University of Tennessee, beginning about 1870. However, the first written evidence that either field crops or soils was taught in the agricultural department at UT is suggested in the description of an applied and special botany course offered in 1876-77. This course included the study of grasses and forage plants.(1)

A textbook used the following year included discussions on weeds, wheat, and grasses. The 1878-79 catalog description of the agricultural course included these comments: "the student is taught to use his chemistry in the analysis of soils, his botany in the study of crops on the farm."

In 1879-80 the practical agriculture program included: classification and properties of soils; manures: mineral, vegetable, and animal; tillage; the grasses, cereals and leguminous plants; rotation of crops; and the improvement of soils.(2) Prof. John M. McBryde was apparently the only teacher of agriculture at this time. Prof. John W. Glenn (1882-87) and Prof. Charles S. Plumb (1887-91) later taught crops and soils.

Major Charles Vanderford, who was professor of agriculture, chairman of the department of agriculture, and secretary of the Experiment Station from 1891 to 1899, had a great influence on the teaching of soils. He wrote a reference called *The Soils of Tennessee*. His inventory of Tennessee soils was the beginning of the soil survey program in the state. Vanderford was probably one of the first soil scientists to make monoliths of soil profiles for use in the classroom and in meetings to teach what would now be called soil classification and morphology. After his death in 1899, an exhibit of his work received an award at an agricultural exposition in Paris, France.(3)

"...the student is taught to use his chemistry in the analysis of soils, his botany in the study of crops on the farm."

By 1900 the agricultural course put considerable emphasis on soil physics, including a study of soil moisture and texture. During this period students were required to work on experimental plots and to become familiar with the methods of improving grain, seed selection, and with the yield and adaptability of crops in various conditions. They also studied the influence of crop rotation, the best methods of propagating legumes, the relative merits of various crops, and the utility of fertilizers in crop production.

In 1900 the University of Tennessee had the only department of meteorology in the South and the only one in a college of agriculture anywhere in the United States.(4) Dr. Charles Dabney, then UT president, succeeded in bringing the United States Weather Station to Old College, which stood at the present site of Ayres Hall. This allowed students to observe station operations, encouraged cooperation with the agricultural faculty, and enabled the weather station operator to teach meteorology.

Weston M. Fulton, the first observer and teacher of meteorology at UT, received an M.S. from UT in 1901. His ex-

periments in temperature and atmospheric pressure led to the development of the Fulton sylphon for thermostats. He later formed the Fulton Company, a division of Robertshaw Controls Company, located on property adjoining the agricultural campus.

The weather station was expanded over the years and was located in the fourth floor or tower of Morgan Hall when that building was completed in 1921. The first modern course in agricultural climatology was organized and taught by Dr. Henry Fribourg. In 1987 Dr. Joanne Logan, the first woman on the plant and soil science faculty, assumed responsibility for the climatology program.

During the early years of the department there were only one or two professors of agriculture; therefore, adequate attention could not be given to all aspects of agriculture including crops and soils. Agronomy was listed as a course for the first time in the 1904 catalog.(5) Prof. Andrew Soule was the main teacher but he was assisted by John R. Fain and by Mr. Vanatter, who was the plot foreman. Five courses were taught including soil and agricultural engineering, crops of the farm, farm management (not about records or business), review of Experiment Station, and preparation of thesis.

The number of teachers and investigators in the field of agronomy in the United States grew rapidly during the early years of the twentieth century. In 1900 there were only three agronomists at land-grant colleges. By 1905 this had increased to 50, and in 1908 there were 99. That year about 100 more agronomists were employed in the United States Department of Agriculture. A group of these scientists formed the American Society of Agronomy on December 31, 1907.(6) Prof. Charles A. Mooers of UT was a charter member of the society and later served as its president.

Although most of the papers presented at the society meetings over the years have been research-oriented, a good number have been on courses of study and methods of instruction in agronomy. Many of the papers and discussions at annual meetings had a significant influence on both undergraduate and graduate instruction.

Early classroom instruction research programs were greatly impacted by professors of agricultural chemistry. The influence of Prof. W.O. Atwater, the first agricultural chemist at the university beginning in 1869, is discussed in the chapter on the early history of the college. Dr. Charles Dabney's leadership as UT president has also been discussed. These early professors no doubt had a great influence upon Mooers and his interest in soil chemistry and soil fertility.

Mooers is best known for his research in soils and crops and as director of the Experiment Station from 1923 until 1947. He received a degree in chemistry from UT in 1893 and



Turn of the century students in agriculture evaluate corn. Agronomy was one of the first agricultural subjects taught at the University of Tennessee.

began work immediately as a chemist for the experiment station. It is not clear when Mooers began teaching; however, his courses in agricultural chemistry in 1904 included topics such as the chemistry of plant nutrients and fertilizers.(7) These topics would be considered appropriate in modern agronomy or plant and soil science courses. In 1905 he was professor of both agronomy and agricultural chemistry. In 1907 agronomy was one of three areas of instruction in the agricultural department; the others were animal husbandry and dairying.

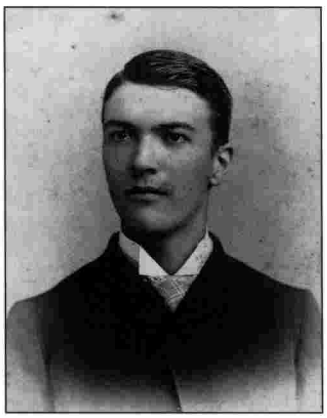
By 1910-11 Mooers was still the only professor of agronomy; however, another position was vacant. The curriculum included two courses in farm study to acquaint students with the experimental plots and management of the university farm. Other courses were physics of agriculture, soil management, cereals, forage and fiber crops, advanced farm crops, and advanced soil fertility.(8)

Agronomy was taught in the short course in agriculture during the first ten weeks of 1911. The two-week agronomy portion included 36 morning hours in the classroom with instruction in crops, soils, fertilizers, insects, fungi, and weeds and 12 afternoon sessions in corn judging and practice with fertilizers. The cost of operating the agronomy teaching program, other than salaries, for the biennium 1910-12 was $81.66.

James C. Pridmore replaced Mooers as the teacher of agronomy in 1911 and remained in that position until Robert B. Lowery came in 1915 as chairman of agronomy.(9) Lowery was chairman for four years but taught soils until 1928.

Oliver W. "Daddy" Dynes came to the department in 1919 as a teacher of crops.(10) He was chairman of the department until his death in 1940. The agronomy department moved from Morrill Hall on the "Hill" to Agricultural Hall, later called Morgan Hall, in 1921.





Charles Ansel Mooers began his career at UT around 1890 as a student and didn't leave until 1946 when he retired after serving as chemist, agronomist, and director of the Experiment Station. He died in 1970 at age 100.

From 1928 to 1929 Russell H. Austin taught soils; then Allen G. Burg joined the department in 1930 as the teacher of soils and researcher.(11) Student affection for Burg is exhibited by a statement in the *Volunteer* yearbook: "beneath this rough exterior there beats a heart of gold."

Upon the death of Prof. Dynes, Dr. Eric Winters, who came to the department in 1938 as a teacher of soils, became head of the department.(12) The agronomy departments of the college and Experiment Station were combined in 1949 with Winters as head. He held this position until he was appointed associate dean of the Experiment Station in 1955.

Winters had a great influence on many young students who remember him as a scholar, a splendid teacher and a friend. He was able to simplify science and apply it to the study of soils. Many of his students went on to become soil surveyors in the rapidly expanding soil survey program in the state. Many of his graduate students obtained doctoral degrees and made significant contributions in education, research, and business.

Dr. Robert P. Moore was added to the faculty in 1939 to teach courses and conduct research in cereal crops. He remained until 1945 when he joined the faculty of North Carolina State University. Dr. John Washko came to the department in 1941 as a forage crops teacher and researcher and remained until 1947 when he moved to Pennsylvania State University.

Judson K. Underwood, who had been on the staff of the botany department of the Experiment Station, also taught forage crops courses and turf management for a few years. Underwood was considered by many faculty, both in agronomy and botany, as a knowledgeable and helpful agrostologist and taxonomist. He was curator of the grass and legume section of the university herbarium and at one time was a plant pathologist for the Experiment Station.

Underwood was a supporter of the crusade against the improper use of chemicals in agriculture as prompted by Rachel Carson's book *Silent Spring*. Underwood was almost alone in the department in his stance against the use of many agricultural chemicals.

AGRONOMY AFTER WORLD WAR II

Winters had the task of selecting faculty to teach the greatly increased enrollment following World War II. During 1946-48, eight new teachers were added to the agronomy faculty: Webster Pendergrass, Charles Smith, Brown Beasley, Frank Bell, J. Keith Leasure, Lloyd F. Seatz, Laurence Skold and Horace Smith. All of these obtained master's or doctoral degrees during the time they were on the agronomy staff.

Five of that group remained with the university until their retirement. Pendergrass later became leader of extension agronomy, dean of the College of Agriculture, and then UT vice president for agriculture.

Forage crop courses have been taught in various formats over the years by Professors Underwood, Washko, Pendergrass, Beasley, Horace Smith, and Dr. John Reynolds.

Following WWII, emphasis was greatly increased in both weed science and statistics. Two courses in statistics were added to strengthen the graduate programs in all departments in the college. These courses were also taken by many students in other departments, especially those in home economics and the biological sciences. Leasure organized and taught these courses until 1954. Others who have taught statistics and experimental design courses have been Prof. Henry Andrews, Dr. Henry Fribourg, Dr. William Barber, Dr. Fred Allen, Dr. Bob Conger, Dr. Dennis West, and Dr. Vernon Reich.

Leasure also taught courses in weed science. Weed courses were also taught by Russell Richards, Henry Andrews, Larry Jeffrey, Dr. Neil Rhodes, Dr. William Krueger, and Dr. Thomas Mueller.

Skold became acting head of the department in 1955 and head the following year.(13) He served in that capacity until he went to India under the U.S. A.I.D. program in 1961, where he remained for six years before returning to the department. Skold taught the one course in plant breeding for many years. When the doctoral program was started in 1964, additional courses in plant breeding were added to the offerings. The following faculty taught some of these courses: Dr. Elmer Gray, Dr. Edward Smith, Dr. Calvin Qualset, Dr. Vernon Reich, Dr. Leonard Josephson, Dr. Bob Conger, Dr. Fred Allen, and Dr. Dennis West.

Seatz was appointed head of the department in 1962(14) and held this position until he retired in 1984. Seatz followed Winters in the teaching of soil chemistry. He



L.M. Josephson, a corn researcher, taught plant breeding classes. He was on faculty between 1954 and 1979.

was followed by Dr. Russell Lewis, Dr. Jeff Wolt, and Dr. Michael Essington.

Bell taught the introductory class in soils for many years as well as courses in soil management. Horace Smith shared the teaching of these courses for several years. These courses were later taught by Dr. Randy Miles, Dr. John Graveel, Dr. Gary Lessman, and Dr. Michael Mullen.

Soil genesis and classification has been taught by Dr. Eric Winters, Dr. Ralph McCracken, Dr. Max Springer, Dr. David Lietzke, and Dr. Tom Ammons. Soil physics has been taught by Dr. Larry Parks and Dr. Glenn Wilson.

The agronomy department occupied most of the office space and all the laboratory space on the second floor of Morgan Hall until 1968 when all the plant sciences moved into the new Ellington Plant Sciences Building.

PLANT AND SOIL SCIENCE

In 1972, the teaching and research programs in fruits and vegetables in the Department of Horticulture were combined with those in agronomy to form the Department of Plant and Soil Science. At the same time, the program in turf management, conducted by Dr. Lloyd Callahan, was transferred from agronomy to the new Department of Ornamental Horticulture and Landscape Design.(15)

Dr. B.S. Pickett, head of horticulture, Dr. David Coffey, and Dr. Homer Swingle joined the plant and soil science department. Swingle taught vegetable physiology and production. Students remember him as a down-to-earth teacher, counselor, and friend. After retirement, he taught vegetable production to hundreds of home gardeners in a university noncredit course and was active in the Senior Citizen Garden Club as a teacher and planner.

Coffey taught courses in the fruit and vegetable areas as well as crop physiology and ecology. Other teachers in the fruit and vegetable areas have been Dr. David Lockwood, Dr. Dennis Deyton, and Dr. Carl Sams.

Upon the retirement of Dr. Seatz in 1984, Dr. W.L. Parks became acting head of the department and served until 1985, at which time Dr. John Foss, former head of soil science at North Dakota State University, was selected to head UT's Plant and Soil Science Department.

The number of students majoring in agronomy and plant and soil science remained relatively small for several years. Enrollment reached a peak during the period 1978 to 1981, when there were from 24 to 32 B.S. degrees awarded. The number decreased to five to seven degrees awarded per year in 1988-94. The departmental undergraduate courses have served many majors in other departments.

The number of faculty greatly increased after World War II because of increased undergraduate enrollment; however, more recently the increase has been due to the need for more research, especially basic research, and to an increase in the number of graduate students. Although the number of faculty has increased, the percentage of the time devoted to teaching per faculty member has greatly decreased. For example, the department had 17 teaching faculty in 1989; however, the percentage of time allotted to teaching per faculty member averaged only about 25 percent, ranging between 10 and 75 percent.

The number of undergraduate courses has not changed very much in the past 25 years, although there was some adjustment when the change to semester system occurred in 1988. Undergraduate offerings in 1990 included eight soils courses, seven crops courses, two in weeds and pesticides, and one each in statistics, practicum, and problems.

Especially with the coming of the semester calendar, agronomic courses were combined. Separate courses in cotton, tobacco, and grain and oil crops were combined with forage crops into a field and forage crops course. The faculty

GRADUATES IN AGRONOMY/ PLANT AND SOIL SCIENCE

Year	B.S.	M.S.	Ph.D.
1968	19	8	0
1969	17	9	0
1970	10	6	3
1971	13	3	5
1972	13	8	8
1973	11	6	7
1974	9	5	3
1975	7	6	8
1976	16	6	4
1977	18	7	5
1978	28	2	2
1979	32	21	2
1980	32	11	0
1981	24	10	3
1982	18	9	6
1983	15	16	0
1984	16	7	6
1985	6	5	5
1986	9	5	1
1987	12	3	5
1988	7	7	3
1989	4	7	0
1990	6	7	2
1991	6	4	2
1992	7	5	4
1993	6	5	6
Total	**361**	**188**	**90**

PLANT & SOIL SCIENCE TEACHING FACULTY

Professor	Year	Specialty
Henry Fribourg*	1956	Forage Crop Ecology
Russell Lewis*	1962	Soil Chemistry
John Reynolds*	1962	Forage Crop Physiology
David Coffey**	1968	Vegetable Physiology
Vernon Reich*	1968	Small Grain Breeding
William Krueger*	1968	Weed Physiology
Gary Lessman*	1969	Soil Fertility
Fred Allen	1975	Soybean Breeding
Bob Conger	1968	Forage Genetics/Breeding
Dennis Deyton	1979	Fruit Crop Physiology
Dennis West	1979	Corn Breeding & Genetics
Carl Sams	1983	Vegetable/Fruit Physiology
John Foss	1985	Head, Soil Genesis
Joanne Logan	1987	Agricultural Climatology
J. Tom Ammons	1987	Soil Genesis
Glenn Wilson	1989	Soil Physics
Michael Essington	1992	Soil Chemistry
Thomas Mueller	1992	Weed Science
Michael Mullen***	1992	Soil Biochemistry

* *Includes earlier service in department of agronomy*
** *Includes earlier service in horticulture department*
*** *Includes earlier service at UT Martin*

teaching either the earlier production courses or combined courses have included Horace Smith, Dr. Larry Skold, Dr. Larry Parks, Dr. Dennis West, and Dr. John Reynolds.

Graduate courses in 1990 included four in soils, two in genetics, and one each in crop ecology, pest management, crop physiology, and design and analysis of research in addition to special problems, special topics, and seminars.

The master of science degree in agronomy was approved in 1906; however, only five degrees had been conferred through 1940. After World War II, the number greatly increased, reaching 14 in 1961 and 1962, and 17 in 1978. The total number of master's degrees awarded through 1989 was 330. Many master's candidates in the 1960s were students from India who were participating in the A.I.D. program.

A Ph.D. degree in agricultural plant and soil science was approved in 1964. Several new graduate courses were added at that time. In 1972, the name of the degree was changed to plant and soil science. This degree program was at first a cooperative one between the departments of plant and soil science and horticulture. It became a program of plant and soil science, with additional faculty from ornamental horti-

FORMER TEACHERS OF AGRONOMY AND PLANT AND SOIL SCIENCE

Professor	Years	Specialty
Charles Mooers	1903-1911	Soil Chemistry, Chairman
James Pridmore	1912-1918	Field Crops, Chairman
Ralph Lowery	1915-1928	Soils, Chairman
Oliver W. Dynes	1919-1940	Field Crops, Head
R.H. Austin	1928-1929	Soil Management
Allen G. Burg	1931-1963	Soil Chemistry
Judson Underwood*	1931-1964	Forage, Turf Grasses
Eric Winters	1938-1955	Soils, Head
Robert Moore	1939-1943	Crop Management
John Washko	1941-1947	Forage Management
Horace Smith**	1946-1979	Crop and Soil Management
Webster Pendergrass	1946-1948	Crop Management
J. Keith Leasure	1947-1955	Weed Science, Statistics
Lloyd Seatz	1947-1984	Soil Chemistry, Head
Laurence Skold	1947-1982	Crop Management, Head
Frank Bell	1947-1981	Soil Management
A. Brown Beasley	1948-1951	Crop Management
Charles Smith	1948-1949	Crop Management
Ralph McCracken	1954-1955	Soil Formation, Classification
Maxwell Springer	1956-1979	Soil Formation, Classification
William Parks	1953-1984	Soil Physics
Russell Richards	1953-1957	Weed Science
Leonard Josephson	1954-1979	Corn Breeding
Henry Andrews	1958-1968	Weed Science
Elmer Gray	1962-1968	Forage Breeding
Edward Smith	1962-1963	Small Grain Breeding
Lloyd Callahan***	1964-1972	Turf Management
Calvin O. Qualset	1964-1967	Small Grain Breeding
George Buntley	1967-1969	Soil Formation, Classification
Larry Jeffery	1969-1984	Weed Science
William Barber	1969-1975	Forage Breeding
Homer Swingle****	1972-1979	Vegetable Physiology
B.S. Pickett****	1972-1973	Fruit Production
David Lockwood	1973-1977	Fruit Production
David Lietzke	1979-1986	Soil Formation, Classification
J.D. Wolt	1979-1988	Soil Fertility
Randy Miles	1983-1984	Soil Management
G. Neil Rhodes, Jr.	1985-1990	Weed Science
John Graveel	1984-1992	Soil Biochemistry

* *Includes service in agricultural botany department*
** *Includes service at UT Junior College, Martin*
*** *See section on ornamental horticulture for later service*
**** *See section on horticulture for earlier service*

culture and landscape design participating.

The number of Ph.D. students has ranged from 10 to 20 each year during most of the program's history. The first degree was awarded in 1967. Since then, Ph.D. degrees have ranged from 0 to 8 with an average of 3.5. A total of 81 doctoral degrees were awarded through 1990.(16) International students made up 23 percent of the doctoral graduates. Of American students, one-half came from Tennessee, 28 percent from other southern states, and 16 percent from the north central states.

Three areas of concentration offered are crop physiology and ecology, plant breeding and genetics, and soil science. About half of the graduates studied crop physiology and ecology, with one-fourth each in soil science and plant breeding and genetics.

About half of the Ph.D. graduates are employed by universities, 35 percent in teaching and/or research and 15 percent in extension. Businesses employ about one-third, with another eight percent in government positions.

The number of graduates in agronomy or plant and soil science is shown in the table at above.

ENVIRONMENTAL SCIENCE

The College of Agricultural Sciences and Natural Resources now offers a concentration in environmental sciences and natural resources. It is administered through the Department of Plant and Soil Science. The curriculum requires a strong liberal arts background including English, math, and the physical and biological sciences.

In core agriculture courses, the students learn about pesticides, pollution, soil composition and chemistry, as well as soil and water conservation. Other departments including forestry, agricultural engineering, agricultural economics, and ornamental horticulture also offer courses that are important to natural resources training.

Many jobs should be available in this field, including those in water quality, environmental consulting firms, Natural Resources Conservation Service, state health departments, Environmental Protection Agency, and in the area of developing environmental impact statements. This program has greatly increased interest in the department, resulting in about a four-five-fold increase in undergraduate enrollment.



Soil judging has always been a popular activity among plant and soil science students. The 1973 team placed first in the Southeastern region and third nationally: (from left) Steve Monteith, Don Wilson, Steve Ottinger, Jake Haun, and team coach, Prof. Horace Smith.

REFERENCES

1. *The University Register,* 1876-77.
2. *The University Register,* 1879-80.
3. Harvey B. Vanderford and Florence Vanderford Davis. *A Tribute honoring Major Charles F. Vanderford.* Monograph 80-1. Department of Agronomy. Mississippi State University, April 1980.
4. *The University of Tennessee Record,* Vol 13, No. 2, March 1910.
5. *The University of Tennessee Record,* Vol. 7, No. 2, 1904.
6. Alfred C. True. *A History of Agricultural Education in the United States, 1785-1925.* United States Department of Agriculture Misc. Pub. No. 36, 1929.
7. *The University of Tennessee Record,* Vol. 8, No. 1, 1905.
8. *The University of Tennessee Record,* Vol. 14, No. 2, March 1911.
9. *The University of Tennessee Record,* Vol. 19, No. 3, April 1916.
10. *The University of Tennessee Record,* Vol. 24, No. 1, April 1922.
11. *The University of Tennessee Record,* Vol. 34, No. 3, May 1930.
12. *The University of Tennessee Record,* Vol. 44, No. 3, May 1941.
13. *The University of Tennessee Record,* Vol. 59, No. 3 May 1956.
14. *The University of Tennessee Record,* Vol. 65, No. 6, Nov. 1962.
15. *The University of Tennessee Record,* Vol. 75, No. 1, Jan. 1973.
16. John H. Reynolds and John G. Graveel. *Characteristics of the First Twenty-Five Years of the Ph.D. Program in Plant and Soil Science.* Research Report 91-25, University of Tennessee Agricultural Experiment Station, Dec. 1991.

INDEX

A

Abbott, Lee 92, 93
Academic Council 42
Adams, Betty 31
Africa 58
African-American students 15, 35, 80
Ag Club *See* Agricultural Club
Ag Club Banquet 41
Agricultural Adjustment Administration 33
Agricultural Club 11, 20, 28, 39, 40, 41, 42, 44, 48
Agricultural Communicators of Tomorrow 42
Agricultural Economics-Business Club 42
Agricultural Education Club 44
Agricultural Engineering Building 29
Agricultural Engineering Journal 45
Agricultural Experiment Station vii, 5, 7, 8, 19, 21, 22, 23, 26, 27, 29, 31, 54, 58, 75, 87, 96, 97
Agricultural Extension Service vii, 8, 10, 14, 19, 21, 22, 23, 29, 33, 54, 63, 72, 87, 89, 93
Agricultural Faculty and Alumni Scholarships 35
Agricultural Hall 8, 26, 31, 69, 75, 96
Agricultural Hall of Fame. *See* Tennessee Agricultural Hall of Fame
Agriculture-Veterinary Medicine Library 31
Agronomy Club 44
Alabama Agricultural and Mechanical College 16
Albretch, T.W. 63
Aldred, Charles E. 58, 59
Alexander, Joe 10, 14, 52, 89, 92, 93
All American Selections 92
All- American Quarter Horse Congress 44
Allen, Fred 97, 99
Allred, Charles E. 46, 50
Alpha Gamma Rho 42, 46
Alpha Zeta Fraternity 20, 42, 46
Alumni Association 28, 34, 41, 51
Alumni Memorial Gymnasium 27, 41
Alumni Public Service Award 52
American Association of Animal Science 50
American College Association 83
American Dairy Association 63
American Farm Economics Association 57
American Fisheries Society 45
American Nurserymen 50
American Royal Livestock Show 43
American Society for Horticultural Science 50
American Society of Agricultural Engineers 42, 45
American Society of Agronomy 44, 50
American Society of Horticultural Science 93
Ames Plantation 85
Ammons, J. Tom 44, 98, 99
Amos, James F. 47
Amos, William Benton 46
Anderson, James 50, 54, 55
Anderson, Robert 88, 89
Andes, J.O. 76
Andrews, George W. 48
Andrews, Henry 97, 99
Andrews, Patti 44
Animal Husbandry Club 44
Arch E. McClanahan Memorial Scholarship 34
Arithmetic in Agriculture and Rural Life 21
Armistead, W.W. 23, 35
Armstrong, Jennie 1
Arnold, Harold A. 53, 55
Asia 58
Associated Landscape Contractors of America 93
Association of Agricultural Colleges 57, 61
Association of Land-Grant Colleges and State Universities 22
Atkins, Samuel 50, 59
Atomic Energy Commission 92
Atwater, W.O. 5, 96
Auburn University 20, 66, 84
Austin, Clyde 11
Austin, Russell H. 97, 99
Ayres, Brown 8, 20, 57, 62, 69
Ayres Hall 26, 28, 95

B

B. Ray Thompson Endowment 36
B. Ray Thompson Outstanding Faculty Award 50
Babcock milk tester 62
Backhop, C.W. 54, 55
Backus, William R. 52, 65, 66, 80
Badenhop, Merton B. 51, 59
Bailey, Hugh iii
Bailey's Principles of Vegetable Gardening 88
Bain, Samuel M. 8, 9, 75, 77
Baird, David 47
Baker, Mrs. Billie viii
Barbara Blount Hall 27
Barber, William 97, 99
Barnes, Samuel 61, 62, 67
Barnett, Albert 72

Barnwarmin' 12, 29, 41
Barnwarmin' Girl 41
Barnwarmin' Queen 41
Barrett, John 84
Barron, Jennifer 46
Barth, Karl 52, 67
Baugus, George A. 47
Baxter, Denver O. 54, 55
Beamer, Rufus W. 72
Beasley, A. Brown 97, 99
Bell, Benny R. 52, 65, 66
Bell, Clyde 47
Bell, Frank F. iii, 13, 14, 44, 50, 51, 52, 97, 99
Bell, Marvin Carl 67
Belt, Kevin A. 46
Bennett, Selmon E. 76, 77
Bentley, Gordon M. 9, 10, 75, 77
Berea College 22
Bernard, Ernest 77
Beuerlein, James 44
Bible, George 67
Biltmore Estate 43, 83
Biswal, R.N. 80
Bledsoe, Bobby 51, 52, 55
Bletner, J. Karl 65, 67
Block and Bridle Club 42, 44
Blount, Barbara 1
Blount College 1, 2, 26
Blount County 16, 26, 61
Blount, William 1
Blount, Willie 1
Board of Trustees 32, 49, 62, 72
Bohanon, Jim 43
Bond, Jim 43
Booher, Michael 47
Bouson, Frank W. 12
Bowers, F.P. 59
Boyce, Erwin K. 54, 55
Boyd, L.J. 63
Brakebill, Charles 45, 72, 73
Bratton, Robert, Jr. 48
Brazil 81
Brehm Animal Science Building 42, 81
Brehm, C.E. 11, 21, 22, 30, 50, 91
Brehm Hall 28, 29, 30, 43
Breshenham, Georgia 92
Bridge, Alcoa Highway 32. *See also* "Buck" Karns Bridge
Bridges, Amy Boyles 46
Bright, Janice 66
Brimm, J.W. 70
Brock, Ben Julian 48
Brooker, J.R. 59
Broome, Frederick M. 8, 31, 50
Brown, Bennett 70
Brown, David W. 59
Brown, Michael 47
Brown, Robert L. 48
Bryant, Elizabeth A. 46
Buck, David R. 47
Buck, John P. 72
"Buck" Karns Bridge 32. *See also* Bridge, Alcoa Highway
Buck, Louis 47
Buck, Reuben 47
Buckner, Edward 50, 52, 84, 89
Buehler, David 84
Buntley, George 99
Burg, Allen G. 97, 99
Burney, Robert W. 73
Burns, Steven 73
Burt, Daniel Keith 46
Burton, James 47
buses 32
Butler, Horace F. 48
Butler, William 47
Byerley, Bill J. 46
Byerley, Paul iii
Byford, James 84

C

Calfee, Linda Susan 46
Callahan, E.P. 50
Callahan, Lloyd 52, 92, 93, 98, 99
Callaway Gardens 91
Cameroon 81
Campbell, John M. 47
Campbell, Saundra 47
Campbell, W.A. 62
Canada 29, 81, 89
Cannon, William, Jr. 48
Cardozier, V. Ray 70, 72
Carpenter, Edwin, Jr. 48
Carpenter, Ruth D. 66
Carribean 58
Carrick Hall 26, 76
Carrick, Samuel 1
Carringer, Herman 63, 65
Carson, Rachel 97
Carter, Cecil (Ted) 52, 72
Carter, George L. 47
Cate, John W. 40
Cato, James Elam 48
Cecil, R. Barry 47
Central America 58
Central High School 70
Chadwick Educator's Award 50
Chair of Excellence 37, 93
Chamberlain, Charles 65, 67
Chambers, John 46
Chambliss, C.E. 31
Chapman, E.J. 12, 34
Cherokee Farm 29, 64, 88
Cherry, Edward 77
Chester, Rebecca Ann 64
Chester, Ric 44
Chicago International Live Stock Exposition 43
Childs, E.A. 80
Chilhowee Park 21
China 81
Christen, Genevieve 43, 80
Christine Bennett 76
Chung, Thau Kiong 46
Civil War 2, 34
Clark, Carol 66
Clark, Edward 44, 84, 89
Claxton, C. Porter 11
Cleland, Charles 51, 59
Clement, Frank 84
Clement, Richard W. 48
Clemson College 5
Clemson University 77
Clendenen, Max 70
Cleveland, Dale P. 48
Cleveland, E. Alan 47
Club House 27, 28
Cobble, Max 46
Cocke, William 1
Cockrill, Benjamin T. 47
Coe, Maynard 46
Coffey, David 35, 51, 89, 98, 99
Coheleach, Guy 35
Cole, John 43, 65, 67
Cole, William 36, 52
Colebank, L.O. 10

Coleman, Russell 77
Coley, Bill 47
Coley, Bonnie 47
College of Business 58, 59
College of Education 71, 73
College of Engineering 54
College of Home Economics 72
College of Human Ecology 73
See also College of Home Economics
College of Liberal Arts 46, 75, 77
College of Veterinary Medicine 46, 66, 67
Collins, Glenda iii
Collins, J.L. 79, 80
Collins, Mike 43
Colvett, William L. 48
computers 31, 54
Conger, Bob 51, 97, 99
Cook, George 2
Cooper, James 43
Copeland, Connie 47
Core, Harold 84, 85
Corn and Cotton Building 30
Cornell University 8, 72, 83
Corrick, Harriet 66
Corrick, Jim 66
Cowan, William B. 47
Cox, Ben 47
Cragle, Robert 63
Craig, David C. 71, 72, 73
Crater, Douglas 93
Cravens, Clarence "Pop" 10
Crouch, John 43
Crum, Jack K. 89
Cullum, Robert 47
Cumberland Plateau 43
Cunningham, Ellyn R. 47
Cunningham, Perry E. 48
Cunningham, S.D. 80
Currell, Sarah 31
curriculum 4, 6, 8, 10, 13, 62

D

Dabney, Charles
5, 6, 7, 19, 20, 75, 95, 96
Dairy Club 42
Dairy Hall 27
dairy judging 43
Dairy Products Building 29
dairy products judging 43
Darter, Vernon 72
Davidson County 34
Davidson, L.A. 40
Davidson, Michael 52
Davidson, P.M. 80
Davis, G. 59, 65
Davis, G.W. 80
Davis, Gordon 43, 52
Davis, Jerry Kendall 46
Davis, Paul Francis 48
Davis, Ron 16
Day, John viii, 50, 51, 52, 92, 93
Deakins, Richard S. 48
Dearden, Boyd 84
Dement, John M. 47
Demott, Bobby J. 63, 80
Denton, Paul 46
Department of Sociology 59
Depression, Great 33, 88
Deyton, Dennis 98, 99
Dickson, Lewis H. 72
Dimmick, Ralph W. 84
Disney, Terry 47
Dorr, Henry 84, 88, 89
Doss, Barry 47
Dotson, Robert S. 52, 72
Dougal, Edward 84
Douglas, Carroll 43
Drain, Brooks 50
Draughon, Ann 50, 80
Dubov, Irving 59
Duke University 85
Duncan, Henry 40, 43, 61, 65, 67
Dynes, Oliver W. "Daddy" 40, 50, 96, 99

E

East Alabama College 20
East Tennessee College 2
East Tennessee Farmer's Convention 26, 27, 28, 45
East Tennessee Packing Company 43
East Tennessee University 2, 3, 4, 5, 87
Eastern Intercollegiate Fruit Judging Contest 44
Eastern Regional Intercollegiate Horse Judging Contest 44
Eastwood, D.B. 59
Edwards, Aaron Keith 46
Edwards, Elizabeth A. 46
Egypt 81
Eiler, H. 66
Elgin Dairy Report 62
Ellington Plant Sciences Building 14, 31, 76, 85, 98
Elliott, Joe 50
Ellis, George Samuel 48
Ellison, Eric 47
Ellison, Wesley 47
Emerson, Fred 84
Emory River Land Company 36
Empty Stocking Fund 44
Engineers' Council for Professional Development 54
Engineer's Day 45
England 81
English, B.C. 59
enrollment 8, 10, 11, 12, 14
Entomology and Plant Pathology Graduate Student Association 77
Entomology Club 46
Environmental Protection Agency 100
Erickson, B.H. 66
Essary, E.O. 65
Essary, Samuel 75, 77
Essington, Michael 98, 99
Estabrook Hall 54
Estes, Jerry N. 47
Ethiopia 85
Europe 75
Ewing, John 30

F

Fain, John R. 35, 96
Fair, Elizabeth Rhea 35
Farm Bureau 20, 35, 72
Farm, Cherokee. *See* Cherokee Farm
Farm, Riverview. *See* Riverview Farm
Farm, University. *See* University Farm
Farmers' Club 39
FarmHouse 42, 47
Farragut High School 70, 71, 77
Fehling, Lois iii
FFA. *See* Future Farmers of America.
Field Day 88
Finnell, Charles R. 48

Fischer, John 59
Fitz, Greg 47
Fitzgerald, N.E. 40, 50, 51, 52, 69, 72
Fitzgerald, Paul J. 47, 48
Flatt, William P. 47, 48
Fleming, Forrest W. 48
Fly, J. Mark 84
Folmsbee, Stanley J. vii
Food Tech Club 42
Food Technology Building 79
football 41
Forestry Club 42, 45
Foss, John 44, 50, 98, 99
Four-H 14, 44, 45
Four-H Alumni Corporation 42
Fournier, Linda iii
France 95
Franklin, John C. 47
Freeland, Robert 55
Fribourg, Henry 51, 96, 97, 99
fruits judging 44
Fugate, Robert 43, 46
Fuller, Charles 59
Fulton Company 96
Fulton, Weston M. 95
Fulton, William M. 8
Future Farmers of America 14, 15, 45, 46, 48, 71, 72, 73
Future Homemakers of America 15

G

G.I. bill 11, 67
Galle, Fred 89, 91
Gamma Sigma Delta 46, 49, 80
Garner, Jack 79
Gary, Lisa Byerley iii
General Motors 93
Georgia 91
Georgia Agricultural Experiment Station 48
Gerhardt, Reid 76, 77
Germany 81
Gernon, Richard 79
Gibbs High School 70
Gibson, H.E. 70
Giesemann, Mark 47
Gilbert, Claire E. 72
Gilstrap, Herman O. 48
Glenn, John 6, 20, 87, 95
Goddard, William H. 47
Godkin, J.D. 66
Goff, Mrs. O.E. 44
Goff, O.E. 30, 44, 64
Golden, D.A. 80
Goothuis, Ellen 46
Gossett, D.M. 16, 23
Graham, Effin 92, 93
Grant, Jerome 51, 77
Graveel, John 44, 49, 50, 51, 52, 98, 99
Gray, Elmer 97, 99
Graybeal, H.C. 70, 72
Greene, Lee S. vii
greenhouse 26, 31
Gresshoff, Peter 93
Griffey, Carl Allen 46
Grimes, David Franklin 46
Grizzle, J.M. 66
Gwinn, Kimberly 77

H

Hafer, Benjamin Lloyd 46
Hall, Jennifer iii
Hall, O. Glen vii, 10, 22, 51, 52, 67
Hamby, Jaye 46, 48
Hamilton, Melissa 47
Hamilton, Susan Wilson 93
Hammitt, William 84
Hansard, Sam L. 65, 67
Hardin, David Ross 46
Hardin, DeWitt T. 89
Hardison, William D. 47
Harley and Juanita Irwin Trust 37
Harms, Robert H. 65
Harris, Edward Lewis 48
Harrison, C. Paul 47
Harrison, John 47
Harrison, Keith 47
Harrison, Steve 47
Harrison, Thomas B. 50, 63, 65
Harrison, Warner W. 48
Harry S. Truman Scholarship 48
Hart, William 55
Harvard 22, 83
Haston, Jean Ann 47
Hasty, Beth 47
Hasty, Lynda Gayle 47
Hatch Act 5
Haun, Jake 100
Hawk, James 47
Hawk, Mary Katherine 47
Hawkins County 1
Haws, Dale 76, 77
Hay, Ronald 35, 51, 52, 84
Heard, Michael 16
Heinrichs, Elvis 76, 77
Heird, Jim 44, 65
Heitmann, R.N. 66
Helios Club 46
Henderson, Herbert 50, 63, 65
Henderson's Practical Floriculture 87
Hendrix, Andy T. 50, 54, 55
Henry, R.W. 66
Henry, Zachary 55
Hervey, Marshall 65, 67
Hesler, L.R. 75, 77
Hess, James P. 26
Hilty, J.H. 76, 77
Hinton, Samuel A. 43, 50, 63, 65
Hinton, T.G. vii
History of the Agricultural Department, University of Tennessee vii
Hitch, Mae 35
Hitch, Tom 35, 36
Hitchcock, J.P. 66
Hiwassee College 88
Hoard's Dairyman 62
Hobbs, Charles S. 30, 65, 67
Hodges Library 31
Holt, Andy 15, 72
home economics 11, 34, 39, 41, 72, 97
Home Economics Building 31
Home Economics Club 40, 41
Hooper, James A. 48
Hopkins, Joseph 63
Hopkins, Troy 47
Hopper, George 84, 85
Horace Maynard Chapter FFA. *See* FFA
Hornsby, Howard 47
horse judging 44
Hoskins, James 10, 11, 19, 84
Housley, John 43
Howard and Ruby Wilkerson Endowment 35
Howard, Kevin 47
Huffine, Joe 47
Humes, Thomas W. 4, 5

Hundley, James C. 54
Hunt, Ellis V. 89
Hunt, Elvis Y. 84
Hunter, Philip 77
Hurst, Daniel 47
Hutton, C.A. 50

I

Idaho 77
India 58, 73, 97,
Ingram, Dewayne 47, 92
Institute of Agriculture iii, vii, 97
Institute of Food Technology 80
International Association of Milk, Food, and Environmental Sanitarians 50
Iowa State College 21, 54
Iowa State University 22
Irwin, Buford 36
Irwin, Charles B. 48
Irwin, Harley 37
Irwin, Juanita 37
Ivan Racheff Endowment 37

J

J.B. Madden Livestock Judging Contest 43
Jack Wright Memorial Scholarship 34
Jacob, Moses 8, 11, 21, 40, 43, 50, 61, 65, 66, 67
Jakus, Paul 59
Jamison, Haley 67
Japan 81
Jaynes, Hugh 51, 52, 63, 80
Jefferson County 35
Jefferson Hall 26
Jeffery, Larry 97, 99
Jenkins, Lori Christine 46
Jennings, Todd 47
Jensen, J.K. 59
Jett, Don 31
Johnson, Karen iii
Johnson, Leander F. 76, 77
Johnson, R.R. 65
Johnson, Ronald 67
Johnson, S.M. 5
Johnston, M.R. 79, 80
Jones, Frank 55
Jones, Harry W. 48
Jones, Pedro 77
Jones, Phillip 40
Jones, Sarah Prince 47
Jones, Troy 44, 88, 89
Jordan, Cheryl 40
Jordan, Dick 40
Jordan, Frances 40
Josephson, Leonard M. 97, 98, 99
judging team coaches 65
judging teams 43
Justus, Laura Helene 46

K

Kain, Kittie 1
Kain, Mattie 1
Kansas State College 21
Karns High School 70
Kattesh, H.G. 66
Keener, James 77
Keffer, Charles 8, 28, 83, 87, 89
Keller, John Samuel 46
Keller, Luther 13, 51, 52, 59
Kelly, Robbins viii
Kendall, David 52, 92, 93
Kerr, Malcolm 67
Kidd, I.O. 65
Killing of Dan McGrew 63
Kingston Pike Trailer Village 40
Kirkland, J.B. 50, 70, 72
Kittle, J. Otto 43
Kitts, Sandy iii
Klindt, Thomas 59
Knapp, Seaman 22
Knepp, Earl 10
Knight, Donald C. 46
Knight, E.B. 70, 72
Knight, Sandy 47
Knox County 45, 54, 64, 77, 89, 93
Knoxville College 15
Knoxville Zoo 44
Koelling, Alfred C. 89, 91
Krueger, William 97, 99
Kruesi, Paul 11

L

Lake Loudon 32
Lambdin, Paris 77
Lambert, Lavone 77
Lamson-Scribner, Frank 75, 76, 77, 87, 89
land-grant colleges 69,
Lard, Curtis 43
Larson, J.A. 59
Lawhon, Marie Oglesby 66
Leasure, J. Keith 97, 99
Legg, Otto P. 72
Lessly, Roy R. 45, 73
Lessman, Gary 50, 98, 99
Leuthold, Franklin O. 51, 59
Lewis, Jeffrey Franklin 46
Lewis, Russell 98, 99
library, agricultural 31
Lidvall, Ed 36, 42, 43, 50, 51, 52, 65, 67
Lietzke, David 44, 98, 99
Liljedahl, J.B. 55
Lindley's Horticulture 87
Little, James 47
Little, Robert 84
Littlepage, Sharon iii
Lockhart, William O. 72
Lockwood, David 98, 99
Logan, Joanne 96, 99
Long, Elizabeth 77
Long, Erven 58, 59
Looney, Thomas E. 43, 47
Louisiana State University 8, 20
Loveday, Dwight 51, 52, 65, 80
Lowery, Ralph 99
Lowery, Robert B. 96
Luebke, B.H. 50
Lush, Robert 63
Luttrell, Houston 55
Luttrell, Woodrow 40
Lyle, John 46

M

MacIntire, W.H. 50
Madden Fund 43
Madden, J.B. 30, 43
Madisonville Vocational Center 71
Maine State College 87
Malueg, Kathleen Renick 46
Marine, C. Lockwood 47
Markovitch, Simon 50, 75
Marks, Ben 47
Marlay A., Sharp 54
Marr, Jerri 16

Martin, Chris 47
Martin, Joseph 58, 59
Masincupp, Frank B. viii, 35, 50, 51, 52, 66
Massachusetts 57
Massachusetts Agricultural College 20
Masse, F.M. 41
Mathew, A.G. 66
Matthews, Cheri W. 46
Maxwell, Daniel 47
Maynard, Horace 3
McBryde, John M. 5, 19, 87, 91, 95
McCalla, Frank K. 47
McCartt, Janice Marie 46
McCarty, Ivon 79
McClain, Forrest 65, 67
McClanahan, Arch E. 34
McClung, Charles 2
McClung, Polly 1
McCord, Governor Jim 29
McCord Hall 14, 29, 30, 63, 65
McCracken, Ralph 98, 99
McCutchen, John N. 48
McDaniel, Gary 92, 93
McDonald, T.P 66
McDow, John J. viii, 35, 54, 55
McFall, Danny Wayne 46
McFee, William M. 47
McGee, George 65, 67
McLaren, J.B. 13, 65, 67
McLaughlin, Michael 77
McLemore, Dan 59
McLeod Hall 29, 79
McLeod, John 22
McMahon, John 10
McManus, Ben 51, 52, 59
McPeak, Glenn 47
McSpadden, Ben 50, 61, 63, 64, 67
McTeer, Florence 50
McVey, Frank 28
meats judging 43
Meek, Paul 11
Melton, Curtis 35, 52, 65, 80
Melton, Sharon L. 80
Meltzer, Joyce 47
Memphis State College 10
Mendis-Handagama, C. 66
Menendez, Gary 93
Merriman, George 50, 51, 66, 67
Meyer, Arthur 88, 89
Michigan 87
Michigan State College 21, 88
Michigan State University 22, 23, 88
Mid-South Intercollegiate Dairy Judging Contest 43
Middle Tennessee Experiment Station 34, 41
Middle Tennessee State Normal School 69
Miles, J.T. 63, 64, 79, 80
Miles, Randy 44, 52, 98, 99
Miller, Howard 65
Miller, J.K. 66
Millsap, Scott 47
Minnesota 87
Minor, David T. 48
Minorities in Agriculture, Natural Resources, and Related Sciences 16
See also African-American students
Mississippi State University 64
Missouri 87
Mitchell, A.E. 44
Mitchell, Arthur 88, 89
Mitchell, Aubrey 31
Mitchell, Kenneth K. 72
Monteith, Steven E. 46, 100
Montgomery, James R. vii
Montgomery, Monty 35, 52, 63, 67
Mooers, Charles Ansel 8, 9, 11, 50, 96, 97, 99
Moore, Donald K. 46
Moore, Frank S. 47, 48
Moore, Jim 47, 48
Moore, Kathleen Anne 46
Moore, RaSharon 16
Moore, Robert P. 44, 97, 99
Morgan Hall 8, 20, 25, 29, 30, 31, 40, 41, 54, 58, 63, 69, 71, 75, 96, 98
Morgan, Harcourt A. 8, 10, 11, 19, 20, 28, 29, 46, 57, 62, 69, 75, 77
Morgan, Harcourt, Jr. 28
Morrill Act 3, 4, 25, 26, 34
Morrill Hall 26, 27, 31, 63, 69, 76, 88, 96
Morrill, Justin S. 3
Morris, E.E. 31
Morris, James 47
Morrow, Edward C. 48
Moser, Christi 47
Moss, Golda 49, 52
Moss, William F. (Red) 36, 49, 52
Mote, Roland 46
Mount, John 52, 80
Mountney, G.T. 65
Mueller, Thomas 97, 99
Mullen, Michael 98, 99
Mullins, Brad 77
Munday, S.D. 59
Mundt, J.O. 80
Munsey, Sue 71
Murphey, Charles 59
Murphree, Robert 52, 67
Murphy, Dwight 46
Murphy, Robert 67
Murphy, William 47

N

National Association of Colleges and Teachers of Agriculture 50
National Poultry Judging Contest 44
National Youth Administration 33
Natural Resources Conservation Service 100
Nave, Mildred 73
Neal and Tacie Peacock Endowment Fund 36
Neal, Lake Ross 39
Nebraska 54
Needham, Doyle W. 48
Neel, James 67
Neel, L.R. 28, 40
Neely, Thomas W. 48
Netherlands 92
New Mexico 87
New York 57, 64, 87, 92
New York Experiment Station 7
Neyland Stadium 27
Niblack, Terri 71, 77
Nichols, William 47
Nicholson, Hubert A. 47
Nicholson, Hunter 4, 19, 31, 53, 57, 62, 95
Noblitt, William G. 48
North Carolina 83
North Carolina State University 6, 23, 63, 71, 84, 97
North Dakota State University 98

Norton, James Franklin 46
Nunn, James 47

O

O'Brien, Billy T. 47
Odum, Newt 30
Ogg, Neil 77
Ohio 57, 87
Ohio State University 28, 44, 46, 66, 93
Old College 28, 95
Old Hall 27. *See also* Club House
Oliver P. Temple Hall 27
Oliver Perry Temple Foundation 36
Oliver, S.P. 66
Orange and White 28
Ornamental Horticulture and Landscape Design Club 42, 93
Orr, Robert H. 59
Orr, Vivian Peterson 46
Ostermeier, David 84
Ottinger, Steve 100
Outstanding Undergraduate Educator 50
Overcast, Woodrow W. 51, 63, 80
Overton, Kathryn 36
Overton, William Simpson 36, 49
Ownley, Bonnie 77

P

Pace, Bobby 47
Parham, P.H. 88
Park, William 49, 50, 51, 52
Parks, W.L. 98, 99
Paschal, Dwight L. 48
Paschal, James M. 48
Patrick, Homer 65
Paulus, A.J. 45, 70, 72
Peacock, Neal D. 10, 14, 21, 22, 36, 40, 50, 51, 52, 63, 88, 89
Peacock, Tacie 36
Pearce, James Richie 46
Pease, Lawrence 65, 67
Pelton, Michael 84
Pemberton, Bromma 35
Pemberton, Grover 35
Pendergrass, Webster 22, 31, 34, 79, 92, 97, 99
Penfield, Marjorie 52, 80
Pennsylvania State College 21, 87
Pennsylvania State University 97
Pentecost, Bob 35
Peterson, G.M. 55
Phi Kappa Phi 51, 80
Philip Morris 35, 73
Philippines 73
Pickett, B.S. 88, 89, 98, 99
Pinchot, Gifford 83
Plant and Soil Science Club 42, 44
Plant Sciences Annex 31, 85
Pless, Charles 76, 77
Plumb, Charles S. 7, 20, 31, 61, 95
Pointer, James 50, 89, 93
Pompelli, Greg 52, 59
Postlewait, Sam 14
Poultry Club 42
poultry judging 44
Powell, Fred 67
Powell, Mark 47
Powell, Thomas 47
Practical Floriculture 91
Price, Jim 43
Price, Martha 47
Pridmore, James 96, 99
Priest, Marshall 77
Prince, Kerri 47
Prince, Martha Jane 46
Professor Lidvall Live Animal Evaluation Contest 44
Progressive Farmer 20, 72
Purdue University 22

Q

Qualset, Calvin 97, 99
Quigley, J.D. 66

R

Racheff Chair of Excellence 93
Racheff, Ivan 37
Ragain, Dale Patrick 46
Ragland, Fowler 43
Ragland, Kevin 47
Rambo, Earl K. 54, 55
Ramsey, Boyd 43, 67
Ranney, W.P. 59
Ratledge, Sherry L. 47
Reagan, Alma 35
Reagan, Hal 35
Reaves, Angela Diana 46
Record 62
Rector, Gretchen 47
Reed, Bill 47
Reed, Howard 77
Rehabilitation Corporation of Tennessee 35
Reich, Vernon 51, 97, 99
Rennie, John 84, 85
Reynolds, John iii, 97, 99
Rhodes, Neil 47, 97, 99
Richards, Russell 97, 99
Richardson, Donald O. 51, 52, 63, 65, 67
Richesin, David 47
Riemann, James 49, 52, 65, 80
Riley, John iii
Riverview Farm 25
Robbins, K.R. 65, 66
Roberts, R.K. 59
Roberts, William 63
Robertshaw Controls Company 96
Robertson, W.E. 70
Roddy, Vernon Earl 46
Rodeo Club 42
Roever, W.E. 88
Rogers, Henry E. 48
Rogers, Johnny 47
Rogers, Leonard 47, 48
Rogers, Mark Gary 46
Rogers, Sam 93
Rollins, C.F. 70
Roosevelt, Franklin D. 20
Ross, O.B. 42, 65, 67
Roundup 28, 42, 44
Rowles, T.K. 66
Rubin, Alfred L. 70, 72
Rucker, William B. 48
Rush Strong Students' Aid Fund 34
Rutherford County 7, 20
Rutland, Rufus 93

S

Safley, Jesse 72
Safley, Lawson 52
salaries 12, 13, 59
Sams, Carl 98, 99
Sanders, O.G. 80
Sanders, Rick 47

Sanford, Edward J. 4
Sappington, Charles 59
Sarten, Joe 46
Saturn Project 93
Saxton, A.M. 66
Schell, Kerry 84
Schlarbaum, Scott 84
Schneider, Gary iii, 23, 84
Scholarship and Awards Recognition Program and Banquet 36
scholarships 14, 33, 34, 37, 73
Schultz, T.W. 66
Science Hall 25, 31
Seaman, Dennis 43
Sears Foundation Scholarship 34
Seatz, Lloyd 31, 51, 97, 99
Selmon Bennett Seminars Fund 76
Senior Citizen Garden Club 98
Sevier, John 1
Sewell, John I. 13
Sharp, John B. iii, 50
Sharp, Marley 55
Sharpe, Harvey 72
Shelton, Curtis H. 35, 54, 55
Sherbakoff, C.D. 50, 75
Shields-Watkins Field 27, 88
Shirley, H.V. 65
Shirley, Hershel 67
Shore, Lawrence 43, 47
short course 8, 9, 96
Shrode, Robert 50, 51, 67
Shuey, G.A. 50
Siegel, P. 59
Sigma Alpha 42
Sigma Xi 80
Sikes, Dennis 66, 67
Silent Spring 97
Simpson, Joe 77
Sims, A.J. vii
Sims, M.H. 66
Singapore 81
Skold, L.N. 14, 51, 97, 99
Smalling, John D. 49, 50, 52, 66
Smith, Charles 97, 99
Smith, Harold 11
Smith, Michael O. 15, 65, 66
Smith, Edward 97, 99
Smith, Harold 67
Smith, Horace iii, viii, 10, 14, 36, 44, 51, 52, 97, 98, 99, 100
Smith, Mary 47
Smith, Shannon 93
Smith-Hughes Act 69
Snell, James G. 52
Snyder, Bill 17
Snyder, Scott 47
Society of Agricultural Education Students 42, 45
Society of American Foresters 42, 45, 84
soil judging 44
Soils of Tennessee, The 20, 95
Soule, Andrew M. 8, 9, 20, 28, 43, 62, 96
South Carolina 77
South Carolina College 20
South Dakota 43, 54, 87
Southards, Carroll 76, 77
Southeastern Collegiate Evaluation Contest 43
Southeastern Poultry and Egg Association 44
Southeastern Regional Soil Judging Contest 44
Southeastern-North Central Collegiate Contest 43
Southern Agriculturist 41
Southern Collegiate Poultry Judging Contest 44
Southern Forestry Conclave 45
Southern Intercollegiate Livestock Judging Contest 43
Southern Nurserymen's Association 93
Southern Railway 34
Southern Regional Educational Board 66
Spann, Ray 20
Spent, Bill 43
Spitze, Robert 59
Spivey, Herman 15
Springer, Maxwell E. 36, 44, 98, 99
Stanley, W.W. 50
Stapel, Luke 47
Starman, Teri W. 93
State Board for Vocational Education 69
State Department of Education 70
State University of New York 92
Steven F. Austin State University 23
Stuart, Lofton K. 47
Stimpson, Steven 46
Stiver, Ernest D. 72
stock judging. *See* livestock judging and animal judging
Stokes, William 3
Stone, April Teresa 46
Strand, A.B. 88, 89
Strange, Richard 84
Strong, Benjamin Rush 34
Struk, Linda 46
Stubblefield, Samuel 47
Student Faculty Council 42, 47, 49
student labor 4, 6, 7, 33, 62
student recruitment 14
Summer School of the South 9
Sutherland, Elizabeth M. 46
Svenson, Sven 93
Swannanoa Hotel 43
Swanson, Eric 63
Swingle, Homer iii, 14, 51, 88, 89, 98, 99
Switzerland 81

T

Tarpley, Johnny 47
Tarver, F.R. 65
Taylor, Jean 31
Teaching Award of Merit 49
teaching methods 13, 14, 36
Temple Hall 25, 28
Temple, Judge Oliver Perry 5, 28, 36
Temple, Mary Boyce 28, 36
Tennessee Agricultural Hall of Fame 20
See also Agricultural Hall of Fame
Tennessee Alumnus vii, 41
Tennessee Collegiate Agricultural/FFA Association 45
See also Future Farmers of America
Tennessee Commissioner of Agriculture 36
Tennessee Department of Agriculture 77
Tennessee Department of Conservation 16
Tennessee Farm Bureau 35.
See also Farm Bureau
Tennessee Farmer magazine *vii*, 11, 31, 32, 33, 40, 41, 43, 44, 48, 49
See also U.T. Farmer
Tennessee Federation of Garden Clubs 34
Tennessee Nurserymen's Association 34
Tennessee ReLeaf program 45

Tennessee River 25, 32
Tennessee School for the Deaf 44
Tennessee State Horticultural Society 22
Tennessee State University 15
Tennessee Valley Agricultural and Industrial Fair 21, 48
Tennessee Valley Authority 8, 16, 20, 29, 33, 34, 54, 84
Terry, Luke E. 40
Texas A & M College 22, 69
Texas A&M University 23, 93
Thailand 81
Thomas, Stephen 16
Thompson, B. Ray 36, 50
Thompson, Emily 12, 41
Thompson, Leah Carden 47
Thompson, Mark D. 46
Thompson, Roger 89, 91
Thompson, W.O. 28
Thor, Eyvind 84, 85
Thorpe, D. Mallory 58, 59
Tobacco Experiment Station 77
Todd, John iii, 52, 71, 72, 73
Tom and Mae Hitch Agricultural Endowment Fund 35, 36
Tompkins, Fred 49, 50, 51, 52, 55
Torchbearers 47, 48
Toys for Tots 44
Trial Gardens 92
Truman, Harry S. 48
Tucker, Gerald 43
Tucker, Harold H. 48
Tugwell, Robert L. 65, 67
tuition 6, 33, 34
Turkey 81
Turner, Carl 43
Turner, David Andrew 46
Turner, Dwayne Allen 46
Turner, Richard G. 10
Tuskegee University 66
Types and Breeds of Farm Animals 61

u

U.S. Division of Forestry 83
U.S. Forest Service 15
U.T. Farmer 40
See also Tennessee Farmer magazine
Underwood, Judson K. 97, 99
Union University 4
United States Department of Agriculture 5, 48, 77, 83, 87, 96
United States Weather Station 95
University Cooperative Creamery 62
University Farm 62, 88
University of California, Riverside 77
University of Cincinnati 7
University of Florida 93
University of Georgia 20, 22, 63, 84, 88, 93
University of Illinois 23
University of Kentucky 22, 28, 92
University of Minnesota 57
University of Missouri 21, 77
University of North Carolina 6
University of Pennsylvania 21
University of South Carolina 20
University of Tennessee 5
University of Tennessee at Martin 10, 22, 23, 67, 84
See also UT Junior College at Martin
University of Tennessee Record 8
See also Record
University of Tennessee Register 53
University of Wisconsin 43
University Record vii, 6, 25
University Register 15, 28
UT Cooperative Creamery 28
UT Junior College at Martin 64, 92, 99
See also University of Tennessee at Martin

v

van de Werken, Hendrik 89, 92, 93
Vanatter, plot foreman 96
Vanderbilt, George W. 43
Vanderford, Charles 7, 20, 95
Vantrease, Bob 43
Varner, Glenn Thomas 46
Varsity Visit 15
Vaughn, Meeks B. 47
Vaughn, Tom 47
Vaughn, William L. 48
veterinary medicine 23
Vick, William Larry 46
Virginia Agricultural Experiment Station 8, 20
Virginia Polytechnic Institute and State University 6, 92
Volunteer Yearbook 41, 97
Von Bernuth, Robert 52, 55
Von Hoe, Hunter M. 48
Voorhees, John F. 12, 89

w

W.F. and Golda Moss Endowment Fund 52
W.S. Overton College Merit Award 36
W.S. Overton Distinguished Professorship in Agriculture 36, 49
W.S. Overton Faculty Merit Award 50
W.S. Overton Memorial Fund 49
W.S. Overton Trust 49
Wachter, David 46
Walker, John 47
Waller, J.C. 66
Walrath, F.J. 50
Walter Reed Hospital 77
Warmbrod, James 85
Warmbrod, Robert 72
Warren, Karen 47
Washko, John 97, 99
Waters, Henry Dean 48
Waters, Randol G. 73
Watson, O.M. 83, 88, 89
Watson, Sallye 47
Watts, Ralph L. 7, 87, 89
Weaver, George 84
Welch, Benjamin, Jr. 48
Welford, Dabney S. 47
Welker, Lorrie 47
Wells, Garland Ray 84
Wesleyan University 5
West, Dennis 97, 99
West Tennessee Experiment Station 23, 34
West Virginia University 63
Whatley, Thomas 51, 58, 59
Wheeler, William 55
White, Charles H. 31
White, James 1
Whittle, W.O. 50
Wiegers, George 71, 72, 73
Wilburn, Doris Ann 46
Wildlife and Fisheries Society 42, 45
Wildlife Society 45
Wilhelm, Luther 35, 52, 55

Wilkerson, Howard 35
Wilkerson, John 52, 55
Wilkerson, Ruby 35
Wilkes, Charles E. 48
William and Golda Moss Endowment Fund 49
Williams, Carey Melinda 46
Williams, Donald 50, 51, 52, 92, 93, 94
Williams, Ruby 47
Williams, Shane 47
Williams, Woodrow 48
Williams-Henson Boys Home 44
Williamson County 35
Williamson, Handy Jr. 15, 58, 59
Williamson, Mark B. 47
Wills, J.E. 59
Willson, Charles 8, 10, 11, 21, 41, 46, 61, 62, 65, 67
Wilson, Beauford 47
Wilson, Bonard 71, 72
Wilson, Don 100
Wilson, Ginger 47
Wilson, Glenn 98, 99
Wilson, Larry 50, 52, 84
Wilson, Susan 93
Windham, Mark 77
Winistorfer, Paul 52, 84
Winters, Eric 51, 52, 97, 98, 99
Winton, James Frank 48
Wisconsin 57
Witte, Will 93
Wolt, J.D. 98, 99
Womac, A.R. 55
women in agriculture 11, 12, 50, 64, 66, 71, 76, 77, 80, 93, 96
Wood, Stephen Allen 48
Woodruff, George Robert 47
Woods, Frank 84, 85
Word, Stanley 47
work-study 33
Works Progress Administration 29, 33
World War I 26, 67
World War II 11, 21, 29, 34, 40, 44, 48, 64, 65, 67, 70, 89, 97, 99
Worley, Neil 47
Worley, Oma 50
Worley, Steve 44, 46, 47
Wright, Dorothy 34
Wright, Hon. T.A. 28
Wright, Jack H. 34
Wylie, C.E. 10, 40, 41, 61, 62, 63, 65

X

Xi Sigma Pi 42

Y

Yale University 83
Yoder, Daniel 55
Yoder, Ronald 55
York, Clyde 72
Young, Brian 47
Young High School 70

Z

zootechny 61