

**TENNESSEE TECH UNIVERSITY**  
**College of Agricultural and Human Sciences**  
**ANNUAL REPORT 2012-2013**

The following information is a reflection of the accomplishments of the College of Agricultural and Human Sciences for the 2012-2013 Academic Year. Units reporting within the College include information from the following:

1. School of Agriculture
2. School of Human Ecology
  - Tennessee Early Childhood Training Alliance
  - Upper Cumberland Child Care Resource & Referral Center
3. School of Nursing
4. Oakley Sustainable Agriculture Center

This marks the final year of this year, as such, with the splitting apart of the College. The Whitson-Hester School of Nursing will have a Dean, rather than a Director starting July, 2013. For the next year, the Schools of Agriculture and Human Ecology, along with the Oakley Sustainable Agricultural Center will also have a Dean. The College of Agriculture and Human Sciences, in its brief 6 year existence, had a most productive record, including:

- ✓ Leading the University in gifts for 5 of its 6 year existence.
- ✓ Record level of gifts over a 6 year period of any College
- ✓ Leading the University in percentage enrollment increase over the 6 years
- ✓ Accounting for 39% of the total student growth over the past 6 years.

**I. STATUS REGARDING FOLLOWING DELIVERABLES (see additional charts in appendix)**

**a. ENROLLMENT—Fall Semesters**

<b>YEAR</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>COLLEGE TOTALS</b>	<b>860</b>	<b>1000</b>	<b>1054</b>	<b>1101</b>	<b>1115</b>	<b>1317</b>

**b. NUMBER DEGREES AWARDED (Summer, Fall, Spring for each year)**

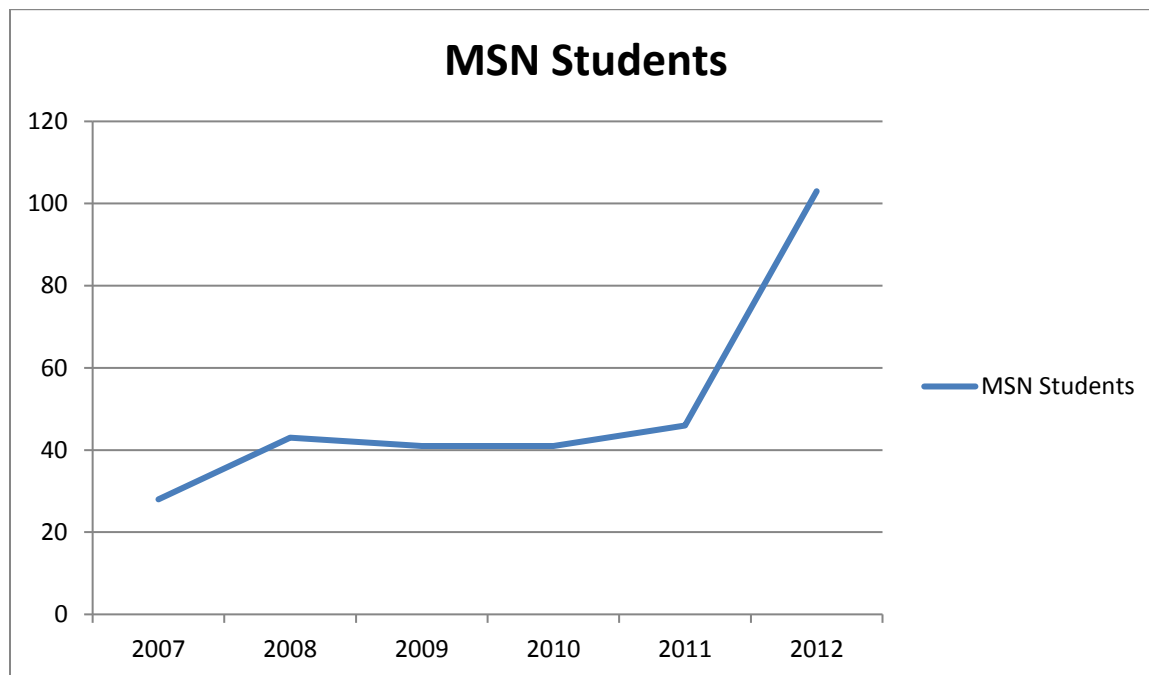
<b>YEAR</b>	<b>2007-08</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
<b>COLLEGE TOTALS</b>	<b>179</b>	<b>181</b>	<b>207</b>	<b>199</b>	<b>199</b>	<b>218</b>

**c. DEGREE INNOVATIONS**

The three Schools and the Oakley Center have a number of innovative programs as outlined in individual reports contained within this document. However, it was recognized the potential for dramatic growth using the new funding formula from the State of Tennessee. The funding formula previously was based upon (principally) how many students you taught in classes. The new formula is outcome-driven, with the

major matrix for funding based upon “how many students do you graduate.” Working with the Vice President for Business and Planning, we targeted Nursing, and three very specific areas; 1). RN to BSN, 2). Dual enrollment and 3). MSN program. For items 1) & 2), we had never actively pursued these areas because it did not make economic sense. However, when TTU gets paid \$25,000 per graduating student claiming Tech as their home, it makes perfect sense. RN to BSN had been around for many years, but Tech had not pursued it. The dual enrollment was a new idea. One day in a conversation with Dr. Stinson, she complained we were not doing enough with those good students we do not let in to Upper Division Nursing, and they go elsewhere to finish. This is when we discussed “dual enrollment.” My idea was to encourage those good nursing students who do not get into Tech, to apply to a Community College instead, and get their AND (Associate’s Degree Nursing) but stay dually enrolled with Tech, and in one semester could complete their BSN with us.

The lower-hanging fruit was the MSN program. Because we got paid to teach, but not paid to graduate MSN nurses, there was actually a dis-incentive for students to declare Tech their how; we were not adequately compensated for the recruitment, advisement, and mentoring for these students. However, when Tech is paid \$25,000 for a student claiming Tech as their home school it made perfect sense.



This expected infusion of additional funding with the State’s New Formula is allowing the Whitson-Hester School of Nursing to add an Advisor to work with these graduate students, faculty release time to recruit both RN to BSN students and also “dual enrollment” students.

In addition, the College has promoted several “travel-abroad” opportunities that include the following excursions taking place in the spring and summer of 2013 that involve faculty and/or students from the College as listed below. The current picture on the University Web Site (below) was taken during the “travel-abroad” to Dominican Republic. Over 60 applications were picked up by students, and eventually, 28 were accepted into the program. The students took clothing to orphans in Dominican Republic, and also painted the inside and outside of several of the buildings. Funding to support this work project was thru Rotary International. Additionally, two of the people involved with this project, one student and one faculty member, were awarded the “Harold Love Community Service Award” in the State of Tennessee (5 students and 5 faculty can receive this award) for their efforts in this project.



Cuba

Dominican Republic

Prague

Peru

Italy

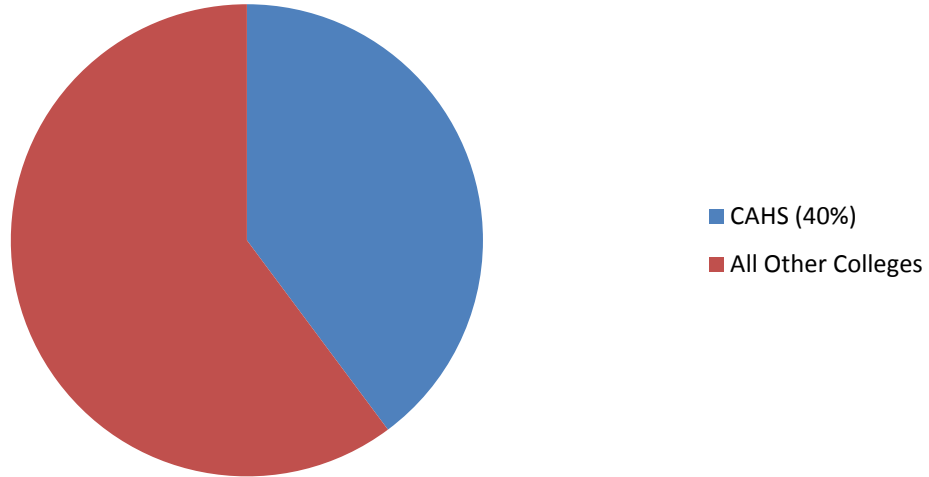
#### MAJOR NEW INNOVATIONS FOR THE COLLEGE:

These will be detailed further in the individual School reports, but some of the highlights are:

- Creation of a new Child-Life Specialist Program (SOHE)
- Creation of a new Agri-Tourism Program (SOA)
- RN to BSN Track (SON)

- Emphasis on MSN recruitment program
- Approved and implementing MS Program (SOHE)

### **Growth in Student Numbers at Tennessee Tech from 2007 - 2012**



**TENNESSEE TECH UNIVERSITY  
SCHOOL OF AGRICULTURE  
ANNUAL REPORT 2012-2013**

The following information is a reflection of the accomplishments of the School of Agriculture for the 2012-2013 Academic year, and for the past five years where appropriate.

**II. STATUS REGARDING FOLLOWING DELIVERABLES**

**a. RETENTION (Fall to Spring and Fall to Fall for First Time Freshmen Cohorts)**

	<b>2008</b>		<b>2009</b>		<b>2010</b>		<b>2011</b>		<b>2012</b>	
	Fall-Spring %	Fall-Fall %	Fall-Spring %	Fall-Fall %	Fall-Spring %	Fall-Fall %	Fall-Spring %	Fall-Fall %	Fall-spring %	Fall-Fall %
<b>SCHOOL TOTALS</b>	<b>89.39</b>	<b>68.18</b>	<b>95.24</b>	<b>80.95</b>	<b>92.0</b>	<b>68.0</b>	<b>92.2</b>	<b>68.0</b>	<b>92.21</b>	<b>92.9</b>

**b. ENROLLMENT—Fall Semesters**

	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>SCHOOL TOTALS</b>	<b>257</b>	<b>266</b>	<b>308</b>	<b>323</b>	<b>328</b>
Agribusiness Management	50	51	61	60	62
Agricultural Communications	3	0	2	4	5
Agricultural Education	22	27	34	39	32
Agricultural Engineering Technology	50	52	45	56	64
Agritourism**	0	0	1	3	3
Agronomy & Soils	8	7	4	9	7
Animal Science	26	33	45	47	48
Animal Science—Pre-Vet	67	57	77	69	70
Environmental Agriscience	8	11	9	15	14
Horticulture	7	8	11	8	8
Nursery & Landscape Management	8	7	8	7	5
Turfgrass Management	8	13	11	6	10

**\*\*Agritourism has just been initiated, so enrollment numbers are low**

**c. NUMBER DEGREES AWARDED (Summer, Fall, Spring for each year)**

	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>
<b>SCHOOL TOTALS</b>	<b>44</b>	<b>48</b>	<b>59</b>	<b>64</b>	<b>56</b>
Agribusiness Management	9	12	12	17	10
Agricultural Communications	1	0	0	2	1
Agricultural Education	4	3	3	6	5
Agricultural Engineering Technology	12	19	9	14	10
Agritourism**	0	0	0	0	*

Agronomy & Soils	1	2	1	0	1
Animal Science	8	6	19	13	12
Animal Science—Pre-Vet	4	1	5	4	6
Environmental Agriscience	3	2	2	3	4
Horticulture	0	0	3	2	2
Nursery & Landscape Management	1	1	2	3	1
Turfgrass Management	2	3	3	0	4

**\*\*Agritourism has just been initiated, so there are no retention numbers as of yet**

#### **d. DEGREE INNOVATIONS**

**Agricultural Engineering Technology**—Proposal for Accreditation—Process began Fall 2010

- Now in the third of a multi-year process. The curriculum has been changed to meet the criteria for Accreditation, and now must be implanted for the committee to judge its effectiveness. Projected completion of this process would be fall of 2013

**Restructuring of School Concentrations—**

##### *Plant & Soil Science*

- A completely new concentration combining Agronomy & Soils, Environmental Agriscience, Horticulture, Nursery & Landscape and Turfgrass is under development and hopefully will be ready to submit by fall 2013.

##### *Agribusiness Management*

- Due to the growth in numbers in Agribusiness and the logical concept of combining Agritourism into the mix, a proposal is under development to create a stand-alone degree for this concentration.

##### *Development of a Master's Degree*

- Due to a series of personal issues, the Director was unable to complete project in 2012, but is now re-addressing the project. The letter of intent for a Master of Science in Agriculture is currently in process. Projected deadline for submission is August 15, 2013.

### **III. COLLABORATIVE EFFORTS**

- **QEP—Basement Mural---**Dr. Janice Branson and Dr. Pat Coleman  
Work on this project, begun in 2010, continues, of course completion will be delayed until we move back to South Hall. “Agricultural Communication using Visual Media”—This project included both art and agriculture students. The mural runs the length of the north-south hall in South Hall’s basement.

### **IV. PROGRAMS AND PROJECTS**

- **AGED 4950, International Experience 2013--**Prague. Third year of travel course developed to provide insight into the world of international agriculture—includes two weeks in Prague. (Tomas & Best)

- Received donation of log cabin by the Koger family. The cabin was disassembled on site and moved to the heritage farm by Agricultural Engineering Management students. Construction came to standstill due to missing (deteriorated) logs. Dr. Foster is working on recruiting an outside expert to aid in the completion. (Foster, Tomas & Baier)
- Completed search for Animal Science faculty and hired Dr. Dennis Fennewald to fill the role.
- Initiated recruitment efforts for the Agricultural Education faculty position, search struggled through the current ineffective university process. However, it appears candidates will be selected for interviewing in June 2013.

## V. HIGHLIGHTS OF KEY AREAS

### a. FACULTY RESEARCH

#### • Awarded grants

- \$515**--Dean's Faculty Development Fund. Travel/mileage for six presentations: Four at Mid-Atlantic Horticultural Short Course in Newport News, VA; Two at Tennessee Landscape & Nursery Winter Education Conference, Pigeon Forge, TN; Two at Bloom 'n' Garden Expo, Franklin, TN (Airhart)
- \$500**—Planting non-vegetated riparian zones in Cookeville Urban Growth Boundary Map. Cookeville Department of Public Works and TN Wildlife Resources Agency. (Airhart)
- \$6000**—TTU QEP grants for two Centennial Celebration Renovation projects (Airhart)
- \$5000**—TTU Faculty Research Awards—Economic impact of trunk flare excavation of field-grown nursery trees (Airhart & Best)
- \$3000**—High tunnel and field production of organic cut flowers (Airhart & Dodson)
- \$2000**—TTU QEP grant for Farm Management Software Tools (Best)
- \$3930**—TTU URECA! Grant for undergraduates—Sustainability of an edible landscape in an urban environment (Branson as faculty supervisor; Katie Gibbs as student researcher)
- \$4000**—TTU URECA! Grants for undergraduates—Comparison of the efficacy of urea nitrogen agent for Bermuda grass hay production (Branson & Greene as faculty supervisors; Cortney Black as student researcher)
- \$11,598.00** – Higher Education Grant, Tennessee Department of Education. Professional Development for secondary level Agricultural Education teachers in Tennessee (Frazier, Foster)
- \$149,000 (year 2)**—USDA Higher Education Challenge Grant. “Food Safety in Agritourism” (Branson, Anderson, Greene)
- \$2,500**—Student recruitment for Animal Sciences at TTU—US Poultry & Egg Association. (Fennewald)

- l. **\$250**—Develop a pasture poultry interest at TTU—American Pasture Poultry Association (Fennewald)
  - m. **\$3000**—TTU QEP—Flower Bed as Annual Calendar (Foster)
  - n. **\$1500**—TTU QEP—Agritourism Festival as an Experiential Learning Tool (Tomas)
- **Published Abstracts**
    - a. none
  - **Oral Presentations**

**Airhart, D.** (2012) Proper Pruning and Trimming. 2012 Middle Tennessee Landscape Short Course, Williamson County Expo Center, Franklin, TN. 19 January.

**Airhart, D.** (2012) Tennessee Certified Arboretum Program Update, 2012 Board Retreat, Tennessee Urban Forestry Council, Evans Mill Road, Smithville, TN. 20 January.

**Airhart, D.** (2012) Purchase & Installation Standards, Advanced Arboriculture session, 2012 Mid-Atlantic Horticulture Short Course, Newport News, VA. 30 January.

**Airhart, D.** (2012) Maintenance Standards, Advanced Arboriculture session, 2012 Mid-Atlantic Horticulture Short Course, Newport News, VA. 30 January.

**Airhart, D.** (2012) Elemental Nutrition for Trees, Advanced Arboriculture session, 2012 Mid-Atlantic Horticulture Short Course, Newport News, VA. 30 January.

**Airhart, D.** (2012) Myths that Kill Trees, Advanced Arboriculture session, 2012 Mid-Atlantic Horticulture Short Course, Newport News, VA. 30 January.

**Airhart, D.** (2012) Grades and Standards for Tennessee Trees, TNLA Winter Education Seminar. Pigeon Forge. 20 February.

**Airhart, D.** (2012) Picking & Planting Trees, 2012 Bloom 'N' Garden Expo, Franklin, TN. 13 April.

**Airhart, D.** (2012) Tree Risk Assessment: Examine a Tree from Top to Bottom, Tennessee Urban Forestry Council Annual Conference, Ellington Ag Center, Nashville, October.

**Airhart, D.** (2012) Pruning, Tennessee Master Nursery Program, Ag Research Station, McMinnville, TN. 27 November.

**Greene, B. B.** (2012) Understanding Hay Quality Analysis, Putnam County Cattlemen's Association, September.

**Foster, B.** (2012). Advancing the School of Agriculture: Defining Agritourism, TN Tech Garden Club, November.

**Tomas, S. R. & Saltmarsh, A.** (2012) An evaluation of relationship between visitors' perception of service performance and on-site destination image. Presented at the International Society of Travel and Tourism Educators (ISTTE) Annual Conference. Freiburg, Germany. October 16-18, 2012.



**Tomas, S. R.** (2012) Agritourism: Opportunities for farm diversification, Income opportunities and educational experiences. National Sweet Sorghum Producers Association Annual Conference. Gatlinburg, TN. Feb. 2012.

**Tomas, S. R.** & Saltmarsh, A. (2012) North Carolina Zoological Park 2011 Visitor Study. Presented to Zoo Administration. Asheboro, North Carolina. May 17, 2012.

- **Research Reports**

**Tomas, S. R.,** and Saltmarsh, A. (2012) *North Carolina Zoological Park 2011 Visitor Study*. Report prepared for the NC Zoo Administration. February 13, 2012. 62 pp.

- **Articles in Refereed Journals**

**Tomas, S. R.** & Saltmarsh, A. (2012) An evaluation of relationship between visitors' perception of service performance and on-site destination image. Presented at the International Society of Travel and Tourism Educators (ISTTE) Annual Conference. Freiburg, Germany. October 16-18, 2012 (refereed conference proceedings).

Colucci, S., Rich, S. R., **Tomas, S. R.,** Carleo, J., Komar, S., & Schilling, B. (2012) *Using Social Media to Market Agritourism*. Agricultural Publication AG-751-W. North Carolina Cooperative Extension Service, North Carolina State University, Raleigh, NC. (refereed Extension Publications)

**Tomas, S. R.,** Rozier, R., Colucci, S., Schilling, B., Carleo, J., Komar, S. (2012). *Creating the customer experience: Tips for Agritourism businesses*. Rutgers Cooperative Extension, Rutgers University, New Jersey, Agricultural Experiment Station.

### **Articles in Discipline Magazine or Non-refereed Journals**

**Airhart, D.** (2012). "Consider your future landscape when selecting this year's Christmas tree," Herald Citizen, November 2012.

## **DISCIPLINE MAGAZINES**

### **b. BOOKS PUBLISHED**

**Best, M.** (2011- ) "*Entrepreneurship on Small Farming Operations*," Ohio University Press—IN PROCESS

**Tomas, S. R.,** and Kline, C. (2013). *Resident Perceptions of Tourism in Carriacou, Grenada*. Book chapter in: "Spice Tourism and Destinations," Joliff, L. (Editor).

**c. INNOVATION RESULTING IN SAVINGS, EFFICIENCY AND/OR IMPROVED OUTCOMES**

- Utilizing faculty and staff teams to better utilize teaching farm facilities.

**d. FACULTY, STAFF AND STUDENT AWARDS**

**i. Faculty & Staff Awards**

- Dr. Douglas Airhart, National Association of College Teachers of Agriculture (NACTA) Teaching Award of Merit, 2013
- Dr. David Frazier and Dr. Byron Housewrite, 2012 Co-Outstanding Faculty Members, School of Agriculture, Tennessee Tech University
- Dr. Jim Baier, Outstanding Faculty Member, School of Agriculture, 2013

**ii. Student Awards**

- Elissa McClerran served as Tennessee's candidate for national officer elections for the National FFA Association at the National Convention in Indianapolis, Indiana in October.
- Katie Dickson was elected National Delta Tau Alpha (Agricultural Honor Society) Eastern Vice-President.
- Tennessee FFA Alumni Convention Collegiate Events Competition winners:
  - **TTU Collegiate FFA selected as #2 ranking team at the National Alpha Tau Alpha Honorary** Convention in Indianapolis, Indiana
  - TTU students competed successfully in the parliamentary procedure event, the quiz bowl, and the sales event.
- At the Tennessee FFA Annual Convention in Gatlinburg two of our students were elected as state officers for 2012-2013:
  - Scott Bohanon , Middle Region Vice-President
  - Colton McClanahan, State Treasurer
- Summer Internships awarded to TTU SOA students:
  - Tennessee Farmers Co-op
    - Matthew Reed
    - Ryan Allen
    - Joshua Shoulders
    - Joshua Howard
    - Taylor Jordan
    - Daniel Arnette
  - Tractor Supply
    - Alyssa Bussell
  - Texas NRCS
    - Scott Scudder

- TN FFA Foundation
  - Katie Butcher
- USDA
  - Collin Snoddy
- Phillip Morris
  - Kayla Kimes
- Tennessee NRCS
  - Mandy Millard
- National FFA-Washington Leadership Convention
  - Elissa McLerran

**e. COMMUNITY SERVICE ACTIVITIES**

- Farm Days with Tennessee Farm Bureau (all faculty and staff)
- Putnam County Soil Conservation District Tree Sale (Branson)
- Tennessee FFA Goodwill Luncheon (all faculty)
- Tennessee Farm Bureau/TTU School of Agriculture Collegiate Debate (Tomas)
- First Heritage Farm Fall Festival (Tomas & Baier)
- Tennessee FFA Career Development Event hosts for Dairy Products, Floriculture, Poultry and Nursery/Landscape (Foster, Branson, Airhart, Fennewald, Greene)
- Dual enrollment/Dual Credit workshop for teachers (Greene and Byler)
- Hosted the “Heartland Apicultural Society” annual Conference (Greene)
- Assisted in the development of the Putnam County Beekeeper’s Association (Greene)
- Hosted the Tennessee Tech SOA Agriscience Quiz Bowl preliminaries (at Hyder-Burks) and final rounds at Tennessee Farm Bureau Young Farmers Annual Meeting (all faculty)
- Tennessee Beef Agribition, Lebanon, TN (Greene & Fennewald)
- Presentation, “Beekeeping,” Nashville Tech horticulture class (Greene)
- Tennessee Tech Garden Club Auction—plant donations and identification assistance and process assistance (Airhart, Foster & Branson)
- District FFA Agricultural Mechanics Career Development Event (Baier)
- Liaison to Farm Bureau Farm Days for “Ag in the Classroom” at Hyder-Burks Pavilion.
- Attended and aided with booth set-up for *Ag Day on Capitol Hill*, May, 2013. (Tomas)

**VI. INSTITUTIONAL EFFECTIVENESS**

**I. School of Agriculture’s Mission Statement**

*Our mission is to prepare students for leadership roles in the food, fiber, and natural resource professions by providing state of the art experiential learning through agriculture.*

## **PROGRAM GOALS**

### **II. Program Description**

The School of Agriculture at Tennessee Tech offers a Bachelors of Science in Agriculture focusing on one of 11 concentrations. Those concentrations span across the wide umbrella of Agriculture and include: Agribusiness Management, Agritourism, Agricultural Communications, Agricultural Education, Agricultural Engineering Technology, Agronomy and Soils, Environmental Agriscience, Animal Science, Pre-Veterinary Science, Horticulture, Nursery & Landscape Management, and Turfgrass Management.

We prepare our students, upon graduation, to enter a multitude of fields in the agricultural industry or to continue their education through graduate school. Previous graduates can be found across Tennessee and the United States in roles such as park rangers, veterinarians, golf course superintendents, government officials, business owners, county agents, conservationists, university professors, military officers, high school teachers, consultants, agricultural product/equipment sales, bankers, farm managers, landscape developers and the list continues to grow.

The School of Agriculture is also blessed with two unique farms that make up our Heritage Farm System. In 1965 the Shipley Farm (300 acres) was acquired and houses the Hyder-Burks Pavilion, horticultural greenhouses, the organic plant operation, sheep, hogs and cattle, varied row crops and the home site developing Shipley Heritage Farmstead. Finally, in 2009 the Oakley Farm completed the triangle and brought a myriad of possibilities with an 1800-acre working ranch. These facilities are supported by direct line funding by the state and therefore must pay their own way, however, all facilities are dedicated to the overall education experience of our students.

Our vision states "*We are the hallmark program of experiential education in agriculture.*"

**Program Goal 1:** *Increase undergraduate student enrollment on average five percent per year from 2006 to 2012.*

**Program Goal 2:** *Encourage external funding and increase interaction of faculty and students with the Nursery Crops Research and Service Center and other opportunities that might encourage undergraduate student research.*

**Program Goal 3:** *Promote and enhance faculty and staff development to the extent resources permit.*

**Program Goal 4:** *Strengthen curriculum and increase resources and opportunities for student learning.*

**Program Goal 5:** *Strengthen scholarly and service activities of faculty and staff as permitted by resources.*

**III. Program Goal Assessment & Rationale:**

- a. **Assessment Rationale for Goal 1:** Enrollment trends will be checked annually through the “Summary of Majors” and appropriate enrollment reports made by the university. Student profiles will be examined to compare the make-up of our students.

Encourage campus visits by prospective students and high school groups, update recruitment brochures, emphasize recruitment of female and minority students to increase diversity, involve the SOA student ambassadors in recruitment events, increase course access to part-time students, and review and revise articulation agreements to encourage transfers to the School of Agriculture.

This goal will be evaluated through ongoing assessment of:

1. Review of responses from graduating senior exit interviews.
2. Information from the Alumni Follow-up Study, when available.
3. Review of Faculty Activity Reports for involvement with student club service projects and student competitions.
4. Review of faculty supervision of AGR 2910, 2920- Work Experience; AGR 2940, 2950-Internship; AGR 3940, 3950, 3960-Advanced Internship.

- b. **Assessment Rationale for Goal 2:** Encourage increasing opportunities for cooperative research activities through collaborative faculty projects both within the school and with faculty from other disciplines and inclusion of student workers on these projects. Encourage faculty to seek external funding where appropriate opportunities and sources are identified. As of 2012, to encourage both faculty and students to seek University small grants for faculty research and undergraduate research (URECA!).

Assessment will take the form of review of “Annual Reports” by the faculty and School of Agriculture and the Water Resources Center to determine cooperative projects and grants received.

- c. **Assessment Rationale for Goal 3:** Provide opportunities for, and encourage faculty and professional staff to attend professional meetings, workshops and other training events.

Assessment completed through annual activity reports, determining participation in training events.

- d. **Assessment Rationale for Goal 4:** Review and update the curricula in agriculture to assure students can progress to meaningful careers in agriculture or in further graduate work or professional training.

- 1) Add, revise or delete courses as needed and as resources permit.

- 2) Encourage use of accessible facilities at TTU, including both university farms, greenhouses, Hyder-Burks Pavilion, Heritage Farmstead, internet and library resources, and laboratories to gain meaningful learning experiences.
- 3) Encourage development of on-line resources to aid student learning.
- 4) Provide extracurricular activities to aid in development of leadership and social abilities and confidence.

Assessment through annual faculty reports, senior exit interviews including the ACAT (and the alumni surveys to determine faculty activities and student and alumni satisfaction with the degree program. Additional reviews added when the university adopted the IDEA course evaluation program.

- e. **Assessment Rationale for Goal 5:** Continue to provide research support and service support to the Middle Tennessee Nursery and Landscape Association and other Agricultural Organizations in areas related to program and faculty expertise. Support and improve, where possible, the Ag-in-the-Classroom program for schools in the region and review the Ag-in-the-Classroom activity with Farm Bureau representatives. As of 2011, increase the courses that offer service learning opportunities for students in order to reach out to the community at large. Encourage faculty to publish as least one peer-reviewed paper per year. Annually monitor SOA Annual Reports for indication of participation and success. Renew and consult with the Nursery Crops Advisory Committee, the Heritage Farmstead Advisory Committee and other such groups about needs and contributions

#### IV. Results of Assessments of Program Goals

##### a. Results from Assessment of Goal 1:

Based on the retention rate and student success (as measured by completers of programs), it appears things are moving forward. Noting consistencies in Fall to Spring Retention and Fall to Fall Retention, losing more students on the latter for a variety of reasons including lack of funds, poor grades, life changes, etc.

Table 1. Current Available Retention rates of Freshmen Cohorts

	Fall-to-Spring Retention	Fall-to-Fall Retention
2012 Cohort	92.9%	<i>unavailable</i>
2011 Cohort	92.2	68%
2010 Cohort	92.0 %	68.0%
2009 Cohort	95.2 %	80.9 %
2008 Cohort	89.4 %	68.2%
2007 Cohort	88.6 %	77.4%

2006 Cohort	88.7%	63.6%
2005 Cohort	84.3%	72.5%
2004 Cohort	83.3%	66.7%

Table 2: Overall enrollment compared to Freshmen enrollment

	Fall Overall	% Change	Fall Freshmen	Spring Overall	% Change	Spring Freshmen
2012-13	328		<i>Not available</i>			
2011-12	323	5.2%	81	316	6.4%	<i>Not available</i>
2010-11	307	15.1%	75	297	23.2%	69
2009-10	267	4.0%	63	241	1.7%	60
2008-09	257	13.7%	66	237	10.7%	59
2007-08	226	7.1%	62	214	9.7%	55

2Table 3. Successful School of Agriculture Graduation rates

	Total number of Graduates
2011-2012	60
2010-2011	55
2009-2010	48
2009-2008	44
2008-2007	37

Table 4. Student enrollment by gender and ethnicity for the School of Agriculture

Year	Male	Female	Caucasian	African American	Asian	Hispanic	American Indian/ Alaskan	Pacific Islander/ Native Hawaiian	Non US Citizen
2008	162	96	255	2					1
2009	168	98	262	3					1
2010	158	149	305	2					
2011	162	152	308	5		1			
2012		<i>Still unavailable</i>							

**b. Results from Assessment of Goal 2:**

Table 5. Grant proposals submitted and awarded.

Year	Number proposal submitted	Number of grants & sources awarded	Total Amount Received for Year
2012	15	14	\$172,204
2011	19	10	\$356,300
2010	17	13	\$324,592
2009	5	2	\$19,500
2008	10	5	\$439,011

**c. Results from Assessment of Goal 3:**

Table 6. Faculty and staff development activity

Year	Professional Meetings or Trainings Attended	Professional Organization Membership	Peer-reviewed presentations and publications	Professional Organization Appointments or Offices Held
2008	15	20	6	10
2009	13	20	4	11
2010	19	26	4	31
2011	26	38	4	34
2012	17	39	3	10



d. **Results from Assessment of Goal 4:**

Table 7. Examples of Exit Interview Comments of Graduating Seniors, SOA Alumni Follow-up surveys and ACAT Scores and their uses in making curriculum decisions

YEAR	RECOMMENDATIONS	ACTIONS TAKEN
2008	<ul style="list-style-type: none"> <li>Exit interviews of graduating seniors complimented faculty members who had encouraged participation in activities that required them to make presentations.</li> <li>ACAT Scores for graduating seniors indicated our students exceeded national averages by 10 points and ranked in the 57-70 percentile for students in the various disciplines. More details can be found in Table 9.</li> </ul>	<ul style="list-style-type: none"> <li>Faculty members were encouraged to increase student participation in making oral and written reports in their courses.</li> <li>Results reported and differences in test results by areas of concentrations were discussed by faculty in regard to possible curriculum changes.</li> </ul>
2009	<ul style="list-style-type: none"> <li>Graduating seniors' exit interviews noted the following: STRENGTHS  <p>"The classes gave a very informative base which to start a professional career."</p> <p>"Courses are very "hands on" and practical application based, providing better preparation."</p> <p>"The faculty here show a true interest in students and try to all them opportunities unique to preference.</p> <p>With each major having a club and then other clubs that were also available, social development and leadership opportunities were ample.</p> <p>The School of Agriculture always seems to have lots going on with service projects and get togethers than enhance friendships and bonds."</p> </li> </ul>	<ul style="list-style-type: none"> <li>Faculty and staff met to discuss results and move to make edits to existing curricula, seeking ways to provide more experiential learning opportunities.</li> <li>Access to facilities was reviewed and ideas developed to make them more accessible for students. However this was a year of transition as a new Director was hired in the fall, but did come on board until January. Consequently, many ideas were tabled for future consideration.</li> <li>Again ACAT results were reported and faculty discussed strategies in teaching and curriculum to bring the scores back up. <ul style="list-style-type: none"> <li>Individual concentration advisors/faculty agreed to address the importance of the ACAT with their</li> </ul> </li> </ul>

	<p>NEEDS IMPROVEMENT</p> <p>“Not enough basic, “hands on” experience.”</p> <p>“Wish curriculum had more crops and feeding classes for Ag Business.</p> <p>Students need more opportunity to take advantage of the exceptional facilities available to students at TTU.”</p> <ul style="list-style-type: none"> <li>• Alumni survey</li> <li>• ACAT Scores for graduating seniors for 2009-10 indicated a slight slip with our students dropping 25 points below the national averages at the 48 percentile level.</li> </ul>	<p>individual students and classes.</p> <ul style="list-style-type: none"> <li>○ Testing was set at a time convenient for the graduating seniors during the last two weeks of the semester.</li> </ul>
2010	<ul style="list-style-type: none"> <li>• Exit interviews for graduating seniors noted that more interactive, hands-on opportunities at the School Farms were needed. Specific comments included: “Lots of internships are need to give you more hands on training.”</li> </ul> <p>Requirement to take a range of different classes in different Ag fields gives you a broader understanding of ag in general.”</p> <p>“I believe I could have had more hands on experience and being out in the field, but that experience can also be gained through internships.”</p> <ul style="list-style-type: none"> <li>• ACAT Scores for graduating seniors in 2010-11 indicated a continued slip between the national average this time dropping to the 40<sup>th</sup> percentile.</li> </ul>	<ul style="list-style-type: none"> <li>• The Director and Faculty moved to develop a co-managerial team approach to making farm decisions, allowing more input from faculty and making utilization of the farm more user-friendly for both faculty and staff. The Oakley Farm in Livingston still poses a challenge for involving students due to the distance factor, but faculty are working on curricular edits regarding when certain classes and laboratories are offered to help with this issue.</li> <li>• Faculty concerns increased and new strategies were employed to increase students understanding of the importance of the exam. Grades and performance in graduate school and the working world did not reflect the same image as the scores.</li> <li>• Holding the exam in the evening and providing students with pizza/or sandwiches to keep their</li> </ul>

		<p>attention from focusing on end of the day hunger.</p> <ul style="list-style-type: none"> <li>• Prior to the exam, having each faculty member share the importance of this exam with students during a class period.</li> </ul>
2011	<ul style="list-style-type: none"> <li>• Exit interview of graduating seniors highlighted strengths and needed improvements. Key points follow:</li> </ul> <p><b>STRENGTHS</b></p> <p>“Community service” requirements that force us to become involving in activities outside of the classroom setting...this is an important aspect to provide a wide spectrum of activities.”</p> <p>“I was able to enhance my leadership development through the clubs in the school of agriculture. The faculty support this and opportunities are there to travel to conference and meet other students with the same future goals in agriculture.”</p> <p>“The faculty is amazing in my opinion. They always take the time to stop and talk with you whenever you have a question regarding anything, even if it is outside of school work.”</p> <p>“I like how I had to dip my toes in every department of agriculture. I am a pre-vet major, but I also had to take engineering and horticulture classes. I think this opens up students to new perspectives they might not have thought about.”</p> <p><b>NEEDS IMPROVING</b></p> <p>“The School of Ag should be actively participating in new agricultural research and allowing students to play an active role.”</p> <p>“Senior level classes need more service</p>	<p><i>*Note: The written portion of the exit interview moved to an online format in the spring of 2011.</i></p> <ul style="list-style-type: none"> <li>• Faculty reviewed comments and discussed primary concerns and how to implement changes in curriculum to meet the needs.</li> <li>• Courses have been added, revamped and/or combined to better serve the students’ needs including: <ul style="list-style-type: none"> <li>○ ANS 2250</li> <li>○ AGBE 2010</li> <li>○ ATOU 1120</li> <li>○ ATOU 3310</li> <li>○ AGRN 3620</li> <li>○ AGRN 3630</li> <li>○ AGRN 3610</li> <li>○ AGR 4890</li> </ul> </li> <li>• Beginning in the Spring of 2012, the faculty voted to make changes in the process. The following changes will be implemented this spring: <ol style="list-style-type: none"> <li>1. The ACAT will be given earlier in the semester, instead of the last week. We have targeted the week following Spring Break in March.</li> <li>2. Instead of all seniors taking the exam at the same time and in the same room, each discipline will be broken out by advisor and given in separate rooms.</li> <li>3. Faculty/advisors will monitor the exam for the students in</li> </ol> </li> </ul>

	<p>oriented projects.</p> <p>The computer lab needs to stay open longer.”</p> <p>“Strengthen our study abroad programs.”</p> <p>“More emphasis needs to be put on how to apply for government jobs.</p> <p>Get curriculum out to high school students early so they know which classes to take in high school.”</p> <ul style="list-style-type: none"> <li>ACAT Scores for graduating seniors in 2011 indicated continued slip dropping to an all time low with an average raw score of 43%. Comparison data should the National Average score for agriculture in the 2010-11 year to be 424, while TTU’s overall average was 364.</li> </ul>	<p>their discipline, aiming to encourage each group by the presence of their individual advisors and mentors.</p>
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**e. Results from Assessment of Goal 5:**

Table 8. Scholarly and service activities

YEAR	FACULTY	STAFF	# of courses with a Service Learning requirement
2007-08	9	54	1*
2008-09	15	22	1*
2009-10	19	22	2*
2010-11	26	53	4*
2011-2012	101	56	4
2012-2013	103	58	4

*\*The courses are offered in multiple sections.*

**V. Modifications and Continuing Improvement: Program Changes due to Assessments**

**a. How Results Have Been Used (for Goal 1):**

Increased emphasis has been placed on discussing career options in Agriculture with prospective students and with existing students. A wide variety of students have been recruited to help with various School sponsored activities such as the Academic Quiz Bowl, Farm Bureau Farm Days (Ag-in-the-Classroom), SOA student organization

events and travel opportunities. Faculty members continue to seek ways for students to attain a level of “ownership” in the overall program.

**b. How Results Have Been Used (for Goal 2):**

Grants and contracts awarded are beneficial to the programs within the School of Agriculture. Faculty increase knowledge bases and students are encouraged to be part of this active learning process. Successful grants and contracts are reviewed to encourage faculty to continue preparing grant proposals. Successful grants and contracts are recognized in a public purview when appropriate.

**c. How Results Have Been Used (for Goal 3):** Based on faculty and staff involvement, additional funds are made accessible for faculty & staff for continued participation when funds are available.

**d. How Results Have Been Used (for Goal 4):** Faculty have reached out to adopt university-suggested teaching improvements to enhance their courses through the Quality Enhancement Program (QEP). Mini-grants received from the QEP program have provided an interactive mural in the basement hallway; new equipment for high-tunnel plant projects; and new measuring apparatus for animal science programs. The faculty has added courses to the University General Education Core and participates in offering three sections of the required freshmen orientation course.

All faculty are members of their individual professional associations, and the School is a member of the North American Collegiate Teachers of Agriculture Association.

Faculty members and staff are expected to place teaching at the highest priority level of responsibility. Research and service opportunities allow faculty to improve their own knowledge base and therefore improve the enthusiasm found in their classrooms. These opportunities also allow for alternative funding sources as state supported funding decreases.

**f. How Results Have Been Used (Goal 5):** The School Advisory committee, as well as specialty committees for Nursery Crops and the Heritage Farmstead have been re-vamped in purpose and new members invited to share ideas to strengthen the various programs.

A new concentration in Agritourism was developed and TBR approved, leading to the hiring of a new faculty member. In addition, a new Animal Science faculty position was approved and interviews are in process at this time.

## **STUDENT LEARNING OUTCOMES**

***Outcome 1:*** *Students will be prepared for entry and advanced in Agricultural careers.*

***Outcome 2:*** *Interested students will be ready for entry and advancement in graduate/professional programs.*

***Outcome 3:** Students will participate in activities and programs that enhance their leadership and social development.*

***Outcome 4:** Beyond the classroom, students will engage in high quality scholarly activities and public service activities designed to enhance the food, agriculture, and natural resource system.*

## **VI. Rationale for Outcomes and Assessments**

### **a. Assessment for Outcome 1**

- i. Assessment of this Outcome will utilize a variety of instruments, including:
- ii. A nationalized agricultural comprehensive examination (ACAT) will be given to all graduating seniors during their last semester prior to graduation.
- iii. Follow-up study of alumni of the School of Agriculture conducted every odd-numbered year and provides a survey of alumni who graduated 1, 3, 5, 10, 15, 20, and 25 years before. Alumni evaluate course work in each area of concentration; non-agricultural requirements; and extracurricular activities for preparing them for professional responsibilities required by their respective careers;
- iv. The director of the School of Agriculture conducts exit interviews at the end of the semester in which they graduate. Students are asked to comment on effectiveness, reach academic, personal and professional goals;
- v. Annual faculty reports will be examined to determine faculty activities and concordance with the degree program.

### **b. Assessment for Outcome 2**

- i. Continue to increase the utilization of the computer facility for the School of Agriculture by incorporation of these resources into present and future courses.
- ii. Continue to stress critical thinking skills in existing courses.
- iii. Assessments will stem from review of the results of the Alumni Follow-up Study in determining:
  1. alumni satisfaction with their preparation for graduate student, professional advancement, and employment

### **c. Assessment for Outcome 3**

Two methods are being used to assess this goal. These are:

- i. Exit Interviews with Graduating Seniors, and
- ii. The Follow-Up Study of Alumni of the School of Agriculture.
  - a. To determine alumni satisfaction with their preparation for graduate school,
  - b. Preparation for professional advancement, and
  - c. Success in gaining employment.

### **d. Assessment for Outcome 4**

Evaluation of this outcome will continue to be determined from:

- a. Review of responses from Interviews with Graduating Seniors.
- b. Information from the Alumni Follow-Up Study, when available.
- c. Review of Faculty Activity Reports for involvement with student club service projects and student competitions. R
- d. Review of faculty supervision of AGR 2910-2920 Work Experience, AGR 2940-2950 Internship, AGR 3940-3950-3960 Advanced Internship.
- e. **Rationale for Assessments**
  - f. *The ACAT* is a discipline driven evaluation of student learning provided by an exam prepared and scored by an outside entity. It is given to graduating seniors by designated faculty. All seniors are required to take the exam, but neither their grades nor their graduation are affected by the scores. Over time we noticed our students were not taking the test seriously and concerned with the steadily dropping averages, we decided to make some changes. Beginning in the Spring of 2012, the faculty voted to make changes in the process. The following changes will be implemented this spring:
    - a. The ACAT will be given earlier in the semester, instead of the last week. We have targeted the week following Spring Break in March.
    - b. Instead of all seniors taking the exam at the same time and in the same room, each discipline will be broken out by advisor and given in separate rooms.
    - c. Faculty/advisors will monitor the exam for the students in their discipline, aiming to encourage each group by the presence of their individual advisors and mentors.
  - g. The Exit Interview and Follow-up survey appear to be appropriate for measuring social and leadership development. Exit interviews with graduating seniors were initiated during the 1990-91 academic year and have been conducted each semester since that time. The follow-up study of alumni is conducted every other year. The School of Agriculture will continue to provide academic programs that will address important issues and problems related to state, national, and international communities. The school will continue to offer many opportunities for student leadership and social development including a broad range of extracurricular activities to allow applications of knowledge and concepts acquired in the classroom.

## VII. Results

### Results of Assessment for Outcome 1

Table 1. ACAT scores compared to the national average

	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
National Average Score	507	521	512	424	454	unknown

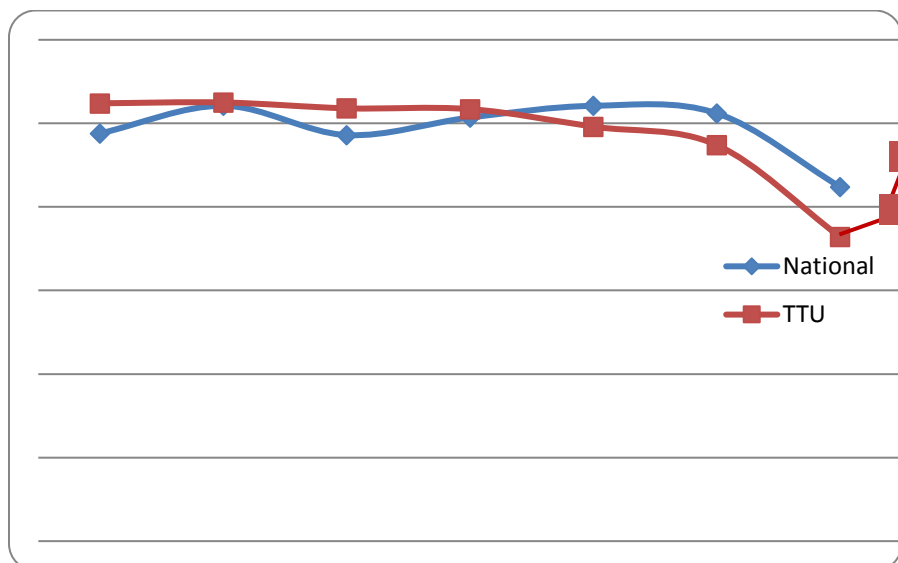
TTU Average Score	517	496	474	364	397	508
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According to ACAT (Area Concentration Achievement Tests) developers, 68% of all scores will fall between 400 and 600 in any given year. Scores are averages based on the performance of graduating seniors in each of the years shown. Average scores typically do not equal 500 because each year's scores are based on a cumulative reference group made up of the previous six years' graduates. The composition and performance of the reference groups differ somewhat from year to year.

Looking at Chart 1, we see a similar pattern in scores nationally and the TTU student scores, noting that TTU students surpass the national average from 2004 to 2008. Beginning in 2009, TTU scores begin dropping, but so do the national scores in 2010. Concerned faculty determined to strategically address this drop as outlined above. In addition to the three steps listed we now offer the exam in an online format that provides almost instantaneous feedback for the students. The faculty believes this enhances the desire to perform by the students.

Another possible cause of the downward trend of students at TTU and across the nation would be the trend to graduate in 4 years with 120 credits. This movement required drastic cut-backs in concentration/specialization areas in order to be able to complete all the general education requirements. Consequently students have not been exposed to as much detailed information or experience as previous generations.

Chart 1. Comparison of National Average Scores with TTU Student Scores in Agriculture





Of the 72 *Alumni surveyed* in the 2009-2010 Follow-up study, 27.5% noted, when acquiring their current employment positions, the curriculum they experienced was of average benefit. However, 47.3% ranked their experienced curriculum as providing above average or greater benefit. Thirty four percent of this same group rated extra-curricular activities, including leadership opportunities and club memberships as providing great benefit in their current positions.

Composite views of the graduating senior exit interviews show definitive patterns in which student request more hands-on experiences, more opportunities to study and work on the farms and more opportunities for internships. Detailed examples of comments can be found in Table 7.

## Results of Assessment for Outcome 2

Table 10. Student plans and entry into graduate programs

	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
<b>*Students completing the ACAT indicating they intended to continue their education / of total taking ACAT</b>	<b>10/37</b>	<b>14/46</b>	<b>7/23</b>	<b>18/57</b>	<b>16/57</b>	<b>12/30</b>

## Results of Assessment for Outcome 3

1. Students responded on the senior exit interview to indicate that generally they feel there are ample opportunities to develop leadership and social skills in the School of Agriculture.
2. Student responses suggest the greatest opportunities are provided by student clubs, group activities in courses, the Ag. Communications course, the Ag-Human Ecology Ambassadors, and student competitive teams.
3. Student responses suggest that the biggest limitations for participation in clubs and other events that contribute to leadership and social development include reluctance by freshmen to get involved, employment schedules of working students, commuting, and insufficient promotion of club activities.

## Results of Assessment for Outcome 4

1. Several students indicted that they feel the Ag-In-The-Classroom program is a very good public service program.

2. At least three classes in the school now have service learning components allowing students to become further involved with the community around them. ANS 1200, AED 3010 and AED 4150 all have routine service learning components. Other courses incorporate service learning when it best suits the current curriculum.

3. The School of Agriculture now has 12 student organizations with faculty advisors. These organizations provide a variety of opportunities for community service, social interaction and competitive growth.

4. Students are involved in a variety of scholarly activities such as the student developed and run “Fall Festival of Agritourism,” and the “Block & Bridle Annual Bull Sale.” In both instances students are involved from planning and publicity all the way through to budgeting and preparing appropriate presentations for each event.

#### **I. Modifications and Continuing Improvement: Program Changes due to Assessments How Results Have Been Used (for Outcome 1)**

These results have led to the following processes:

1. Increases advisement by faculty for student internships.
2. Offering of international agricultural classes in the form of traveling seminars. Student groups have traveled to Prague, Czech Republic and Mexico. These trips have helped determine concentration future, much in the same way internships do.
3. A new concentration in Agritourism has been developed and a new faculty hired to grow the program. This opens new doors to economic development in the Upper Cumberland while offering new avenues of employment to our students.
4. A course in Bee Keeping has also been developed and three courses in Food Safety in Agritourism heralded a new collaboration between Agriculture and Human Ecology.
5. The number of actively sought after grants has increased along with increase success in obtaining outside funding—some which led to the development of the new courses.

Faculty have continued to...

1. Regularly evaluate and revise the curriculum to meet the changing needs of the agricultural industry;
2. Enhance course offerings by adding short courses or seminars to the needs not addressed in the present curriculum;
3. Enhance opportunities for internships, field experiences, practical farm experiences, and cooperative arrangements for practical experiences;
4. Encourage utilization of the Tech and Hyder Farms, Hyder-Burks Pavilion, the Oakley Farm, internet and library resources, and laboratories to gain meaningful learning experiences;
5. Provide a broad range of extracurricular activities (such as judging teams, club activities, skills contests and leadership activities) to build leadership, social abilities, and confidence;
6. Seek informal input from alumni and potential employers of agriculture students on the effectiveness of the present curricula.

## **How Results Have Been Used for Outcome 2**

1. New processes are being utilized in the way we administer the ACAT, seeking to provide more useful information for the students themselves. Giving them a better understanding of how far they've come with their degrees.
2. Students are continually encouraged to move into graduate and professional programs. Students expressing interest in such programs are advised to take courses designed to prepare them for education beyond the B. S. degree.
3. Currently (2012) faculty are developing a proposal to establish a graduate program in Sustainable Agriculture.
4. Beginning in 2012, faculty voted to begin tracking the number of graduates immediately moving on to graduate or professional school.

## **How Results Have Been Used for Outcome 3**

1. The schedule of club meeting dates is currently being posted on the bulletin board for students in the School of Agriculture.
2. Routine communication with students via email announcements continues..
3. An annual *Welcome Back Picnic* is held at Hyder-Burks for all students, and freshmen are strongly encouraged to attend.
4. Facebook pages for the School of Agriculture and both the Tech Farm and the Oakley Farm have been developed and are utilized to keep alumni and current students informed and excited about things happening in the School.  
Recommended actions for the future follow:
5. Emphasize the importance of School of Agriculture clubs and organizations during new student orientation and registration.
6. Invite current students to talk with these new students about the leadership benefits they have received by participating in clubs and organizations.
7. Encourage more students to apply for the College of Agriculture and Human Ecology Ambassadors program. Current ambassadors are encouraged to meet with student groups to discuss the benefits of this program.
8. Encourage clubs and organizations to become more involved in community projects and other activities to help them develop local, state, national and international commitments.
9. Emphasize the success of agricultural graduates by conducting follow-up studies and by including highlights of graduates in the College "Great Things Are Happening" newsletter, and in the "Aggie Contact".
10. Continue periodic curricular reviews and revisions of the agricultural major and areas of concentration.
11. Broaden the opportunities for internships, field experiences, and cooperative arrangements for practical experiences that will enhance leadership development.

## **How Results Have Been Used for Outcome 4**

1. Several faculty members have begun posting schedules for involvement opportunities and giving bonus points to students who participate in Ag-In-The-Classroom program.
2. The curriculum will be reviewed during the coming year to consider improving the incentives for students to do internships and senior research problems.
3. Two faculty have encouraged and helped students submit proposals for the new URECA! Student research grant program.

# School of Human Ecology

## 2012 Annual Report

**June 3, 2013**

- 1. A. Retention and Progression:** Please see attached Human Ecology profile prepared by Institutional Research.

Retention: For 2007-2011, the School of Human Ecology has had an average retention rate of 71% for First-time, Full-time freshmen. For the year 2011, the retention rate was 73%, which is slightly higher than the 2011 University retention rate of 69.9%. The retention rate has remained steady overall the past four years. Retention rates for first time freshmen in the fall 2011 cohort revealed 100% of HEC freshmen returned for their first spring (n=15), and for the Fall 2012 cohort, 92.5% of HEC freshmen returned for their first spring (n=25).

Progression: The most current progression data are from 2005 and 2006 and show that for students entering TTU in 2005, and majoring in Human Ecology, 65% of them graduated. For students entering TTU in 2006 and majoring in Human Ecology, 68% graduated. The University progression rate for 2005 was 50% and for 2006 was 52%. (graduation for first time freshmen within 6 years). The School of Human Ecology has exceeded the University progression rate for the most current data available.

**B. Enrollment:**

<b>Total HEC</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>%↑ 2011- 2012</b>
	<b>202</b>	<b>194</b>	<b>175</b>	<b>201</b>	<b>205</b>	<b>266</b>	<b>22.9%</b>

The School of Human Ecology has seen a steady increase in enrollment since 2010, with total enrollment in 2012 an all-time high of 266 students.

**Enrollment by Concentration:**

<b>Concentration</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Child Dev.</b>	<b>33</b>	<b>58</b>	<b>31</b>	<b>36</b>	<b>40</b>	<b>84</b>
<b>HEC Educ</b>	<b>19</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>17</b>	<b>16</b>
<b>Food &amp; Nutr</b>	<b>68</b>	<b>54</b>	<b>57</b>	<b>68</b>	<b>70</b>	<b>82</b>
<b>Housing</b>	<b>43</b>	<b>36</b>	<b>43</b>	<b>44</b>	<b>43</b>	<b>41</b>
<b>Merchandising</b>	<b>39</b>	<b>33</b>	<b>30</b>	<b>34</b>	<b>34</b>	<b>42</b>

The Child Development and Family Relations concentration has seen the largest increase in students, partly due to the addition of the Child Life option in 2011. The Child Life option had 18 students in Spring 2012, and 21 students in Fall 2012.

**C. Number of Degrees Awarded:**

<b>HEC Total</b>	<b>2007-2008</b>	<b>2008-2009</b>	<b>2009-2010</b>	<b>2010-2011</b>	<b>2011-2012</b>	<b>2012-2013</b>
	<b>47</b>	<b>52</b>	<b>39</b>	<b>41</b>	<b>49</b>	<b>51</b>

**D. Degree Innovations:** The School of Human Ecology resubmitted the proposal to offer a Masters degree in Family Sciences and Community Services in May 2013, following comments from TBR on the original proposal submitted in July 2012.

**2. Collaborative Efforts:**

- a. Anderson and Agriculture faculty member Dr. Janice Branson were awarded a \$140,000 USDA grant to conduct Food Safety in Agriculture classes which were conducted January 2012-December 2012.
- b. Anderson collaborated with TTU Athletics personnel Frank Harrell and Chip Pugh to develop proposal to offer Sports Nutrition concentration; presented to Provost Stephens in October 2012 and continues to be in development.
- c. Anderson and Mullens collaborated to write Center Stage Proposal "Jump with Jill", November 2012.
- d. Anderson collaborated with Family and Community Educators and UT Extension Agents to organize and facilitate two camps on the TTU campus during summer 2012.
- e. Cunningham collaborated with Cummins/Fleetguard personnel to complete a Six Sigma project to improve recruitment efforts within Human Ecology.
- f. Mullens collaborated with Study Abroad Italy personnel and TTU personnel to create the Italy Fashion Study tour which was conducted in May 2013.

- g. Plant collaborated with Information Technology Services (ITS) and College of Agricultural and Human Sciences to provide several I-Pad training sessions on using apps in classroom teaching
- h. Swafford collaborates with the College of Education, Curriculum and Instruction Department on two Grants: Healthy Start for Upper Cumberland Families (Stephens Center); and Special Education Strand II (Tennessee Department of Education).

### **3. Programs and Projects: Status-Processes-Outcomes**

- a. MS. Degree in Human Ecology – Family Sciences and Community Services – Status: awaiting TBR/THEC approval to offer Fall 2014.
- b. Accreditation Site Visit: The Food, Nutrition, and Dietetics concentration prepared for a 10-year accreditation site visit, which occurred in April 2013.
- c. The Human Ecology Education concentration curriculum was reviewed as part of the NCATE Accreditation site visit, which occurred in April 2013.
- d. Recruitment efforts: The School of Human Ecology participated in the 2012 TTU Career Fair, and won the award for best booth.
- e. Development Efforts: Plant and Anderson completed training with University Advancement officers: completed three donor visits during 2012 with multiple meetings with Development officers to finalize Development Plan for Human Ecology

### **4. Highlights:**

#### *Faculty Research*

Cunningham:

- TTU QEP grant Medical Nutrition Therapy Skill Enhancement.	\$1,500
- TTU URECA: Summer USDA Internship.	\$3,500
Using Technology to Increase Dietetics Skill.	\$ 680
Effects of Dietary Perceptions on habits of Collegiate Athlete	\$1,000

Jolley:

-2012 TTU QEP grant proposal: “Briland Bound” (not funded, but requested to resubmit)

-\$18,050.00, Swafford, M. (PI) and Jolley, L. (Consultant). FACS Career Technical Grant. Tennessee Department of Education

-\$330,043.00, Swafford, M. (PI). TECTA Tennessee Early Childhood Technical Assistance Grant.

-\$225,000, Jolley, L. (Co-PI) and Sisk, C. (Co-PI). Child Care Resource and Referral Grant, Signal Centers.

Swafford, M., & Anderson, M. (2012). Use of National Certification Exam to Improve Critical Thinking Skills. (\$3000.00)

Healthy Start for Upper Cumberland Families (Stephens Center) \$13,078.00 Howard, M. Principal Investigator Swafford, **M. Support Staff**

Special Education Strand II (Tennessee Department of Education) \$55,539.00 Dainty, H. Principal Investigator **Swafford, M. Support Staff**

TTU Tartan Design. Tennessee Technological University QEP. \$2,000. (L. Mullens)

Food Safety in Agriculture, Co-PI with Dr. Janice Branson, USDA - National Institute of Food and Agriculture, 2 year, \$140,000. (M. Anderson)

*Books Published* – no books published by HEC faculty during 2012

*Other Publications:*



Swafford, M. & Jolley, L.A. (2012). Exploring FCS Role in Promoting secure relationships in families. *Journal of Family and Consumer Sciences*, 104(4). 34-39

Swafford, M., Wingate, K., Zagumny L., & Richey, D. (Submitted January 2013). Families in poverty: Voices related to family-centeredness and quality of life. *Journal of Early Intervention*

Swafford, M., Bailey, S., Mullens. L. (in preparation). Positive learning environments enhance student achievement.

Miller, EA, Greene BB, and Hix-Cunningham, C. 2012. How nutrition education affects diet perceptions and habits of collegiate distance runners. Soc. Nutr. Educ. and Behavior. Annual meeting. Aug. poster presentation. *Submitted*.

*Model for Leadership Change to Assure Sustainability of FCS Units in Higher Education*, 103 AAFCS Annual Conference and Expo Program, (p. 32).

Sisk, C., Walker, E., Gardner, C., Mandrell, B., and Grissom, S. (2012). *Building a legacy for children and adolescents with chronic disease*. Journal of Pediatric Nursing. 27(6), doi: 10.1016/j.pedn.2012.04.008

Jolley, L. (2012, November). Physical Development in early childhood. Social and emotional development in early childhood. Cognitive development in early childhood. Series of Power Point presentations for textbook ancillaries by J. Travers, P. Hauser-Cram, J. Nugent, & K. Thies: *The Development of children and adolescents*. Wiley & Sons: Hoboken, NJ.

*Faculty, Staff and Student Awards:*

Jolley: Gold Cap Award: College of Agricultural and Human Sciences: Award for peer-reviewed journal; presentation at a national conference in 2010-2011 (2012)

Plant: TATFACS – 2012 Outstanding Post Secondary Educator Award

*Community Service Activities:*

Anderson:

- a. Taught ServSafe course and administered ServSafe exam to 4 employees of Overton County Nursing Home, July 2012 (Overton County Nursing Home serves as a Field Experience placement site for our Dietetic Students)
- b. Taught ServSafe course and administered ServSafe exam to 9 employees of Grade A Catering, November 2012 (Grade A Catering serves as a Field Experience placement site for our Dietetic Students)
- c. Participated in “Ag in the Classroom” with Dr. Branson/School of Agriculture, April 2012 as part of the new Agritourism class
- d. Prepared/facilitated the “Golden Grads” luncheon for Human Ecology 50-year Alumni, September 7, 2012 in Friday Café Dining room.
- e. Anderson, M. *Mission Nutrition*. (2012). Capshaw Elementary School Health Fair, Cookeville, TN.
- f. Food, Nutrition & Dietetics Club - hosted a booth at Campus Health Fair, April 2012
- g. Participated in Highlands 8<sup>th</sup> Grade Career Fair, Hooper Eblen, May 2012
- h. Anderson, M. *Sports Nutrition Tips for TTU Athletes*. (June 12 and July 24, 2012). Presented to select groups of TTU athletes as the request of Coach Mike Sutton. TTU Campus.

Cunningham:

Served lunch and made goody bags for Ronald McDonald House residents in Nashville, Sunday Feb. 28. 34 families.

Swafford:

Trainer/Consultant: Holland J. Stephens Center (Fall 2008 to present)

Board Member: University of Tennessee Extension ( 2009 to 2012)

Advisory Member: Community Options, (Spring 2007 to November 2012)

CTE Advisory Board Member: Putnam County Board of Education ( Spring 2012 to present)

Executive Board Member: Putnam County Rural Health Clinics (Spring 2008 to present) Secretary ( Spring 2008 to Spring 2011) Vice President (Spring 2011 to 2012) Secretary ( 2012 to present)

Fair Judge: UT Extension Agents in Putnam and White Counties- Domestic Arts

FCCLA Judge at District and State: Coordinate FCCLA district events with Marta McPeters, make rooms and Back Door Playhouse available. Arrange for students to help judge. Transport students to help judge at state event.

Swafford, M. & Melton, R. (2012, November) *Managing your diabetes during the holiday*. Baxter Rural Health Care Clinic for Baptist Healing Trust Grant, Baxter City Hall, Baxter TN.

Mullens:

- Mullens, L.S. (2012, April). *What's happening in human ecology?* Presented to the South Dayton Family and Consumer Sciences Professionals. Dayton, Ohio. (invited)
- Mullens, L.S. (2012, May). *Governance Transition Report to the Uplands Village Board of Directors*. Pleasant Hill, TN. (invited)
- Mullens, L.S. (2012, December). *Early Quilting Fabrics*. Uplands Village Regional Quilt Exposition, Pleasant Hill, TN. (invited)
- Ad-Hoc Committee on Early Childhood Licensure PreK-K for TDOE

Plant:

Habitat for Humanity Weekend Build

Sisk:

Ad-Hoc Committee on Early Childhood Licensure PreK-K for TDOE

St. Jude Radiothon Guest on FM 94.7

Jolley:

Ad-Hoc Committee on Early Childhood Licensure PreK-K for TDOE

Volunteer, Capshaw Elementary School First Grade

Cookeville Pregnancy Center, “Diapers and Wipes” Service Project

Mustard Seed Ranch Christmas “Gift Certificates” Service Project

Genesis House “Food Drive” Service Project

5. SACSCOC Reporting – see attached report for Human Ecology



**TENNESSEE TECH UNIVERSITY**  
**Oakley Sustainable Agricultural Center**  
**ANNUAL REPORT 2012-2013**

**1. Status related to Academic Progress (N.A.)**

**2. Focus on internal and external collaborations:**

1. \$1,000,000 endowment – working directly with a donor who has verbally committed to a \$1million endowment; timeline is not known.
2. \$1,100,000 funding from City of Cookeville/ Putnam Co/ ARC/ Rural Development/ Chamber of Commerce/ State of Tennessee for horse exhibition facility. This collaborative effort involves economic development and student recruitment efforts based upon equestrian activities. The report indicates that thru increased sales taxes, the facility could pay for itself in 5 years; it is an investment rather than an expense.
3. \$3.2 million P.E.T. Care Campus project involving “Friends of the Cookeville-Putnam Co Animals; TN Humane Society; City of Cookeville; Putnam Co. adjacent to Hyder-Burks facility.
4. Funding (\$40,000) tentatively approved for a “feasibility study” to construct a meat processing unity. Funding sought from USDA Rural Development.
5. \$1 million for beef processing plant for campus proposed/ involving Tennessee Department of Agriculture.
6. Travel-Abroad project to Lima, Peru with 15 - 20 students; Rotary grant being requested for \$70,000 for service-learning projects to involve students in major projects to help the ill and poor in Peru.
7. Biogas project with animal waste stream, food waste for generating methane gas; \$750,000 in “Special Legislative Request.” Partners involved include Roy Palk, consultant, Blue Electron, manufacturer of biodigester, Cookeville Regional Hospital, TTU, and rep from Senator Bob Corker’s Office, Katie Davis. Departments on campus include Ag, Engineering, Chemistry.
8. Genetic engineering project with research lab in Massachusetts, TN Depart. of Agriculture, Select Sires (world’s largest bovine semen supplier), Avigen (world’s largest poultry genetics company) and Tech to produce genetically altered sperm for beef, dairy, hogs and turkeys; potential of \$25 million per year

9. Quality beef production project with group from Ohio, Massachusetts, and Tennessee to supply "Prime" beef using enhanced technologies
10. Cooperator on a new antibiotic (Ceragenin) entering the livestock market. Distribution company is AgriSales in Nashville, and developing scientist is at Brigham Young University.
11. \$40,000 Greenhouse construction project – out for bid.
12. \$5,000,000 for naming rights to School of Agriculture (under negotiations)
13. Possible donation of \$1.5 million "King's Mill" 1820's village; Rickman, TN. Property would be managed jointly with Ag, Human Ecology, History, Chartwell's Food Service.

### **3. Programs and Projects; status-processes-outcomes**

- 2). Equestrian Center – The \$1.1 million project was developed as a "Leadership Putnam" project last year, and was taken to and approved by the Putnam County Commissioners, contingent upon support from the City of Cookeville and the State of Tennessee. The City Council has given verbal approval of the project, but the State has not followed thru on supporting the project.
- 4) & 5). There appears to be firm commitment to both conduct the feasibility study and to construct the small meat processing center. We have received verbal feedback from USDA Rural Development that this project will be funded, pending the outcome of "sequestration." The TN Department of Agriculture appears committed to constructing the facility per positive outcome of the feasibility study.
- 7). Per 5) above, this project would use waste streams from a livestock feeding facility plus a Hospital and TTU food service companies to generate biogas to power the meat processing plant, and the waste water and digested nutrients would be flushed to the corn growing area and used for water and nutrients to grow the corn crop that would be fed to the livestock being processed in the meat processing facility.
- 8). A high-risk venture capitalist project, which could lead to TTU being one of the leaders in animal genetics in the world. This project takes technology from ACT Genetics Company in Massachusetts and develops sperm and eggs from skin tissue, growing either *in vivo* or *in vitro*. If successful, Tech would be on the leading edge of technology. Further, Tech would be at the fore-front of beef improvement genetics projects to dramatically improve beef genetics.
- 13). Tech may be donated an 1820's village, about 15 miles from campus, and would cooperate with several other agencies and departments within Tech. These log cabins are "Marriot quality" facilities which can be used for retreats, meetings, events (especially weddings), and other catered affairs.

### **4. Highlights and News for 2012 – 2103**

- A. Faculty Research
  - a. Pasture-raised chickens project
  - b. Greenhouse tomato project
  - c. Lettuce waste/ by-product project

- d. Chicken waste/ by-product project
- e. Genetic engineering/ manipulation project
- f. Forage/ creep-grazing project
- g. Tall fescue toxicosis project

B. Books:

Bagley, C.P. and R.R. Evans. 2013. Tennessee Forage & Beef Handbook. Published by TN FFA Foundation (304 ppg) at printers, 6 May, 2013

Apps:

Bagley, C.P., R.R. Evans, and Victoria Cass. 2013. Tennessee Forage & Beef Handbook. Developed as an “app” for iPads, iPhones and Droids.

C. Referred journal articles

- 1). Bagley, C.P., A. Martell-Cheatham, J.H. Bouton and B.C. Housewright. 2013. Switchgrass yield and nutrient characteristics as influenced by initial harvest date and anhydrous ammonia treatment. J Agric Sci. 1(3): 52-60.
- 2). C. P. Bagley and T. A. Ennis. 2013. Developing a Sustainable and Educational Travel-Abroad Program to Mexico. NACTA J. (submitted)
- 3). Ennis, T.A., and C.P. Bagley. 2013. Pre-Test and Post-Test surveys for evaluating effectiveness of service-learning work in travel-abroad studies to the Dominican Republic. Service Learning J (submitted)
- 4). B. C. Bastin, A. Houser, C. P. Bagley, K. M. Ely, R. R. Payton, A. M. Saxton, F. N. Schrick, J. C. Waller, and C. J. Kojima 2013. A polymorphism in *XKR-4* is significantly associated with serum prolactin concentration and could be a candidate gene for resistance for cattle grazing tall fescue. J. Anim. Sci. (submitted).

D. International Conference presentations:

- 1). Ennis, Theresa and C.P. Bagley. 2012. TTU Rotaract students travel to Dominican Republic for service-learning in local schools and orphanages. 2<sup>nd</sup> Annual Intercultural Horizons Conf. New York, NY. Oct 4-5, 2012. Podium presentation.
- 2). Bagley, C.P., L.S. Dale and B.C. Housewright. 2013. Preconditioned cattle sales for forage-based cow-calf management systems. Int. Grassl. Conf. Proc. Sydney, Australia. Sept, 2013. --- referred poster accepted.

- 3). Ennis, Theresa and C.P. Bagley. 2013. Developing “volun-tourism” through service-learning travel-abroad experiences. 3<sup>rd</sup> International Intercultural Horizons Conference, Oct. 7-9, Siena, Italy.

E. National and Regional Presentations:

Bastin, B., C. Bagley, B. Campbell, A. Houser, C. Kojima, A. Saxton, J. Waller and L. Wojakiewicz. 2013. Discovery and validation of single-nucleotide polymorphisms with phenotypic associations in beef cattle grazing endophyte-infected tall fescue. South. Assn. Ag. Sci. Abstract. Feb, 2013.

F. State and Local Presentations:

- 1). Murillo, J., L. Norris, J.J. Biernacki and C.P. Bagley. 2013. A participatory pilot study on biomass pyrolysis: feedback from two upper Cumberland counties. TTU Student Research Day. April 11, 2013.
- 2). J. Murillo, J. Biernacki, C.P. Bagley, L. Norris. 2012. Biofuels: Changing our Agro-Economy. TN Soil & Water Conservation Society Ann. Meeting. Nashville, TN Oct 12, 2012
- 3). Invited Speaker, NRCS Society, Chattanooga, TN. May 24, 2013
- 4). Invited Speaker, Livingston Rotary Club, “Future of Agriculture, April 15, 2013
- 5). Invited Speaker, Livingston Rotary Club; Rotaract Students in Travel-Abroad to Dominican Republic; April 1, 2013
- 6). Invited Speaker, Sparta Rotary Club; Rotaract Students in Travel-Abroad to Dominican Republic, April 1, 2013.
- 7). Invited Speaker, White County NRCS Annual Meeting; “Soil and Water Conservation Practices for a Sustainable Beef Cattle Operation. Sparta, TN. November 15, 2012
- 8). Invited Speaker, Cookeville Rotary Club; Rotaract Students in Travel-Abroad to Dominican Republic, April 20, 2013.



9). Invited Speaker, Sparta Rotary Club; Rotaract Students in Travel-Abroad to Dominican Republic, April 1, 2013.

10). Invited Speaker, Cookeville Sunset Rotary Club; Rotaract Students in Travel-Abroad to Dominican Republic, May 7, 2013.

#### G. Faculty, Staff and Student Awards

Bagley, C.P. 2013. State-wide winner, Harold Love Award for Community Service, Faculty division

Nominator of: Kayron Tevepaugh, State-wide winner of Harold Love Award for Community Service, Student division.

#### H. International Travel

1). 2013 Dominican Republic, January 1-11, 2013; Rotary Grant to fund water projects, school painting projects, book projects—28 TTU students in travel party

2). 2013: Travel to Lima, Peru to meet Peruvians and Rotarians to establish a base and projects for TTU students attending a travel-abroad to Lima, Peru, July 14-25, 2013

3). June, 2013. Lisbon, Portugal. International Rotary Conference and agricultural tour to Portugal and Spain.

4). 2013: Oct 7-9, 2013. Travel to Siena, Italy for a conference with a podium presentation; 3<sup>rd</sup> International Intercultural Horizons Conference.

#### I. Journal Editing

Associate Editor, and do editing for Journal of Agricultural Sciences

Edit for Biochemistry and Biotechnology Research

#### J. Community Service Activities

- 1) Board of Directors, Stephens Center for abused children; 5 county area
- 2) Appointed by Putnam Co Commissioners to Fair Board Study Committee
- 3) Cookeville Rotary Club- President-Elect
  - a. Board of Directors for 2009- 2012,
  - b. International Service Chairman
- 4) Cookeville Lions Club, Past-President;
- 5) Executive Committee---Hull-York Lakeland Resource Conservation & Development;
- 6) Cookeville Tree Board;
- 7) "P.E.T. Care Campus" Planning Committee;
- 8) Friends of the Library Board of Directors at TTU;
- 9) Cookeville Regional Medicinal Center "Button Fund" Board of Directors;
- 10) Group Leader, Dominican Republic Travel-Abroad program
- 11) Group Leader, Planning for Lima, Peru Travel-Abroad, January, 2014
- 12) Tennessee Plant Materials State-wide Committee
- 13) TN Soil & Water Conservation Committee
  - a. Board of Directors
  - b. State Vice President
- 14) Leadership Putnam, Class of 2012
- 15) Hull-York Lakeland RC&D Environthon Committee
- 16) First Methodist Church, member
  - a. Board of Trustees
  - b. Wesley Sunday School class
- 17) Board of Directors- Ag Foundation;
- 18) Ag Foundation Executive Committee;
- 19) Board of Directors, Nursing Foundation;
- 20) Nursing Foundation Executive Committee
- 21) Ag 20/20 Leadership Development Committee Board of Directors;