



Agricultural and Applied Economics

A Foundation for the Next Century – A Pathway to 2025

Mission Statement

The Department of Agricultural and Applied Economics will provide the highest standards of excellence in learning, research, and engagement on all aspects regarding the economics of regional, state, and global production, distribution, and consumption of food and fiber goods and services, and public and private use of natural resources.

Vision Statement

The Department of Agricultural and Applied Economics will be recognized as a center of excellence for leadership in learning, discovery, and delivery of knowledge regarding economic aspects of all current and emerging issues related to regional, state, and global food, fiber, animal and human health, and natural resources.

Educate and Empower a Diverse Student Body

Goal 1: Advance and sustain a campus climate and culture characterized by accessibility, inclusiveness, and high academic quality.

- Collaborate with the Student Success Center (Davis College) to recruit and support a diverse student population in line with university priorities.
- Enhance recruitment of students into the Masters of Agribusiness (MAB) and 150-hour BS/Masters programs.
- Recruit students and faculty from non-traditional (non-agricultural), minorities, and female sources as well as traditional sources of candidates by increasing the number of recruiting visits and efforts by current faculty, staff, and graduate students.
- Encourage faculty participation in professional development activities offered on campus to enhance teaching, research, and service.
- Encourage faculty development leaves, foreign work activities, and staff development opportunities.
- Participate in international research efforts to interact with foreign scholars and highlight international research output and funding in annual faculty evaluations.

Goal 2: Nurture and enhance a learning environment that fosters success and wellness.

- Embrace students' learning styles and incorporate internet-based tools into the curriculum.
- Enhance communication skills, problem solving, and critical thinking of students throughout the curriculum.



- Recruit and hire faculty in areas that have been identified as strategic opportunities in teaching and research.
- Engage with industry stakeholders to identify relevant issues and needs that should be incorporated into the degree program curriculum.
- Recognize the best undergraduate students in the department and nominate them for Agri-Techans and Ambassadors for Agriculture.

Goal 3: Deliver unique and transformative learning opportunities and experiences.

- Develop online course offerings at the undergraduate and graduate levels to meet the needs and demands of students on campus and at a distance.
- Maintain and enhance the fully online Masters of Agribusiness degree.
- Increase opportunities for graduate students to engage in teaching activities to better prepare them for academic positions.
- Increase opportunities for internships, undergraduate research, study abroad, and international experience, as well as offer opportunities for certification in key skill areas.
- Evaluate degree programs and curricula on an ongoing basis to provide students with the tools to be successful in the workforce.

Goal 4: Increase retention and graduation rates, and placement of graduates.

- Engage with industry stakeholders to identify internship opportunities for undergraduate and graduate students.
- Encourage faculty advisors to enhance advisement skills and provide faculty advisors with the information necessary to adequately advise students.
- Develop collaborations with the Student Career Center (TTU) and the agribusiness industry to increase access to job and internship opportunities for AAEC students.

Strategic Initiatives

Master of Agribusiness – The Master of Agribusiness (MAB) degree program is a 36-hour program that requires 6 hours of a professional internship. The program may be taken fully online or in person. A 150-hour program is offered in several Davis College departments to link a BS to the MAB.

Agribusiness Roundtable – This program presents a unique opportunity to provide our students with professional development opportunities while they learn more about future career possibilities. The program allows students to meet with agribusiness professionals and discuss issues regarding the management of agribusiness firms.



Partner with the Rawls College with the Excellence in Banking Certificate – Students in the Dual Degree program (AAEC/BBA) may select courses in the Rawls College toward the Excellence in Banking Certificate. This partnership allows students who have an interest in the banking industry to gain variable instruction in lending and credit. Given the number of students that enter the credit industry after graduation, this is an important linkage with the Rawls Finance Area.

Skill Certification – Develop certification programs in key skill areas (e.g., agribusiness analytics) that can be earned within a degree program or earned outside of degree programs by non-traditional, degree-seeking students. These certifications can serve to generate significant additional revenue but also fulfill the continuing education needs of professionals already in the workforce as well as enhance the skills of current students beyond those found in traditional classroom-based instruction.



Table 1. Educate and Empower a Diverse Student Body

Academic Year	2017	2018	2019	2020	2025
1-year retention rate FTIC freshman (Fall)	92.6%	90.9%	85.9%	91.9%	90.0%
4-year graduation rate FTIC freshman (Fall)	56.5%	45.3%	60.3%	61.7%	61.0%
6-year graduation rate FTIC freshman (Fall)	74.8%	83.9%	76.1%	77.4%	80.0%
African-American	1.01%	1.55%	0.64%	1.46%	1.50%
Asian	0.25%	0.22%	0.21%	0.0%	0.50%
Hispanic	14.9%	14.6%	13.8%	12.1%	25.0%
Female enrollment	22.5%	25.2%	28.2%	25.1%	30.00%
Number of baccalaureate degrees awarded (FY)	101	89	86	94	105
Number of master's degrees awarded (FY)	19	13	23	11	25
Number of doctorate degrees awarded (FY)	4	4	6	9	10
Number of undergraduate students enrolled (Fall)	395	453	471	478	500
Number of graduate students enrolled (Fall)	54	69	52	54	75
Number of students studying abroad (FY)	15	25	25	0	30
Number of students in professional internships (FY)	10	10	12	5	15
Total SCH (FY)	7910	8473	9084	9279	11500
Undergraduate SCH (FY)	6593	7045	7506	8119	9750
Graduate SCH (FY)	1317	1428	1578	1160	1750
SCH per undergraduate student (FY)	16.70	15.6	15.9	17.0	19.5
SCH per graduate student (FY)	24.4	20.7	30.3	21.5	23.3
Total number of faculty	22	22	19	20	23
Tenure/tenure track	19	19	16	18	20
Research Assistant Professors	2	2	2	2	2
Instructors	1	1	1	0	1
Total Faculty FTE	21.5	21.5	18.5	19.8	22.5
Student/faculty ratio (Undergraduate)	18.0	20.6	24.8	23.9	21.7
Student/faculty ratio (Graduate)	2.5	3.1	2.7	2.7	3.3



Enable Innovative Research and Creative Activities

Goal 1: Increase the productivity and impact of research, scholarship, and creative activity that advances knowledge, benefits society, improves quality of life, and contributes to economic development.

- Increase research collaboration across disciplines within Davis College, the TTU university system, including the TTU Health Sciences Center and TTU School of Veterinary Medicine, and other university systems and industries.
- Grow the number and quality of publications in top-tier disciplinary journals.
- Grow the number and quality of faculty and student presentations made at professional society meetings.
- Strengthen research areas consistent with supporting our research initiatives.
- Expand inter-disciplinary and inter-institutional research to the extent resource expansion allows by encouraging a high degree of complementarity among tasks (research, teaching, and outreach) within the department.

Goal 2: Enhance capacity and opportunities for research, scholarship, and creative activity for faculty, students, and staff.

- Explore and exploit opportunities to add efficiencies that enhance physical and time availabilities and resources for faculty and students.
- Incentivize and encourage students to present papers at professional society meetings and publish in academic journals.
- Increase the number of grant proposals submitted and the dollars requested.
- Expand the number of cross-department and multi-institutional teams developing federal and other proposals.
- Engage the Davis College grants office, the TTU Office of Research Services, and the Office of International Affairs to assist faculty teams in preparing proposals.

Goal 3: Advance entrepreneurial activity, collaboration, innovation, and technology transfer.

- Collaborate with units within Davis College and the University to provide economic evaluation of innovations and technologies.

Strategic Initiatives

Water and Resource Conservation – AAEC has a long history of research in water and resource economics. The decline of the Ogalala aquifer and the transition to dryland crop production have created a challenge for producers and policymakers. The department has been



an integral part of the Texas Alliance for Water Conservation (TAWC) in evaluating water management and conservation technologies.

Sustainability and Field to Market – Sustainability in agricultural production has become an important issue. Texas Tech is an Affiliated Member of Field to Market and has an important role in measuring agricultural production sustainability in the Texas High Plains. AAEC participates with TAWC and the Davis College Water Center in sustainability research related to water and soil management.

Health and Behavioral Economics – Animal and human health are significant economic drivers in the region and nation. AAEC has consistently participated in health-related research be it through food security and healthcare access and demand. In addition, the creation of the TTU School of Veterinary Science and the OneHealth program offers natural linkages for the development of applied research programs in the area of animal health. AAEC also houses a behavioral economics computer laboratory that can be used to examine all facets of behavioral issues such as consumer choice, risk, and natural resource management.

Agricultural Policy and Risk – AAEC has a long history of being engaged in agricultural policy and risk analysis. The International Center for Agricultural Competitiveness consistently participates in policy analysis through the Food and Agricultural Policy Research Institute (FAPRI) consortium (U. of Missouri, Texas A&M, U. of Arkansas, and U. of Nevada-Reno). Agricultural and risk policies remain key cornerstones for the agricultural sector. However, risk analysis extends beyond traditional agricultural issues into resource management, health, financial management, etc. These areas are key to future growth in applied research.

International Development – International development and engagement are key strategic areas for the university and also represent key research areas for AAEC. Much of international development continues to be agriculturally based but also includes the vital areas of governance, environment/natural resources, and human health. The applied economic analysis strengths of AAEC are vital to the area of international development and remain a growth area for AAEC applied research.



Table 2. Enable Innovative Research and Creative Activities

Academic Year	2017	2018	2019	2020	2025
Total grant submissions, ** \$ M	4.46	7.61	4.80	6.10	8.00
Total awards, ** \$ M	0.77	0.43	0.48	1.07	1.20
Total research expenditures, ** \$ M	0.585	0.735	0.611	0.539	1.0
Federal research expenditures, ** \$ M	0.446	0.464	0.334	0.394	0.70
Research presentations	30	31	14	18	40
Refereed journal articles ^{DM}	28	36	48	50	55
Books/Book Chapters (refereed) ^{*D}	0	1	3	5	3



Transform Lives and Communities through Strategic Outreach and Engaged Scholarship

Goal 1: Instill a culture that recognizes outreach and engaged scholarship as an essential component of the department's activity.

- Increase and strengthen collaborative, mutually beneficial community partnerships that stimulate creativity, innovation, and social and economic development.
- Enhance recognition of faculty and staff who contribute to outreach and engaged scholarship activities that impact local, state, national, and global communities.
- Establish sustainable outreach and engaged scholarship programs through diverse funding streams and long-term campus community partnerships.

Strategic Initiatives

Engagement with the Davis College Water Center – The Davis College Water Center provides a platform for communicating information and opportunities for cooperation focusing on water-resource activities. AAEC works with the Water Center to provide research, education, and engagement activities to address a wide spectrum of water issues pertaining to agriculture and the environment. Such activities include water use and conservation in crop and soil management. Water Center activities impact decisions made by landowners, business managers, and policymakers that lead to sustainable supplies and quality of water.

Texas Alliance for Water Conservation (TAWC) – The TAWC project is a partnership of area producers, data collection technologies, and collaborating partners that includes industries, universities, and government agencies. The project uses on-farm demonstrations of cropping and livestock systems to compare the production practices, technologies, and systems that can maintain individual farm profitability while improving water use efficiency with a goal of extending the life of the Ogallala Aquifer while maintaining the viability of local farms and communities.

International Center for Agricultural Competitiveness – The International Center for Agricultural Competitiveness (ICAC) is dedicated to the creation and dissemination of knowledge related to the competitiveness of U.S. and global agriculture. A core focus of the Center is on both domestic and international policy, with other relevant research areas in technology adoption, product development, resource management, trade, and international development. The Center promotes graduate education and research as well as undergraduate student experiences to help achieve its mission of a broader understanding of competitiveness.

Thornton Agricultural Finance Institute – The primary mission of the Thornton Agricultural Finance Institute is to focus faculty research on important topics in agricultural finance; provide support for courses and research in agricultural finance and related areas; and assist with conferences, workshops, and other public service functions related to agricultural finance and banking. The Thornton Agricultural Finance Institute Co-Sponsors the Annual Bankers Agricultural Credit Conference. The conference program each year addresses issues and topics related to agricultural lending, the agricultural economy, legal and regulatory issues, commodity outlook, and other issues of interest to rural bankers and lenders. The conference is directed by a



board of directors made up of representatives from area banks. The Thornton Agricultural Finance Institute provides a focus for research on important topics in agricultural finance. Agricultural finance is a broad area that relates to many of the research projects within the Department of Agricultural and Applied Economics. The Institute provides resources to assist in several research areas.

