

ANNUAL REPORT
RESEARCH PROGRAM
2014/15

Department of Agricultural and Applied Economics
College of Agricultural Sciences and Natural Resources
Texas Tech University

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Compiled by
Phillip Johnson, DeeAnn Pruitt and Christy Frauman

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General Summary

This report presents research and related outreach activities of the Department of Agricultural and Applied Economics at Texas Tech University during fiscal year 2014/2015. The research program of the Department of Agricultural and Applied Economics addresses various issues of economic significance with an applied focus, although there are disciplinary elements within the research program. Over one-third of full-time faculty resources are devoted to research. Two faculty positions are joint appoints (25% research) with Texas A&M AgriLife Research – Lubbock. Research projects in the department cover a wide range of subject matter areas: production economics (including finance and risk management), marketing, natural resource economics (including water, energy and environmental), international economics (including trade and development), economic policy analysis, and consumer economics.

During FY 2014/15, there were 51 active individual research projects in the department. Appendix A contains the individual annual progress reports of each active research project. Total expenditures for research projects carried out in FY 2014/15 totaled \$1,084,210 (Table 1). Research support from the four endowments in the department - Larry Combest Agricultural Competiveness Endowed Chair, Emabeth Thompson Professorship in Agricultural Risk Management, Charles C. Thompson Chair in Agricultural Finance, and Thornton Agricultural Finance Institute – provided about 21% of total annual research expenditures. Details regarding the funding of specific research projects are provided in Appendix A. Of the \$1.084 million in research expenditures in FY2014/15, 50% was from state sources, 42% from federal sources and 8% from private sources. As shown in Figures 1 and 2, total research expenditures have been declining in recent years, primarily from reduced federal funding.

The Ph.D. and M.S. programs in the department are primarily supported through funding from research grants, state line-item funding, university research incentive funding, and departmental endowments. Therefore, the number of graduate students within the department has been closely tied to the amount of research funding available. Several years ago the department instituted the Masters of Agribusiness (MAB) degree program which is more scholarship based and not dependent on the presence of research dedicated funding. The MAB program has been growing and in fall 2015 reached the highest level of enrollment (20) since its inception. The introduction of the 150-hour BS/MAB program has been instrumental in increasing MAB enrollment. A total of seven graduate degrees were awarded in FY2014/15 - one Ph.D., three M.S. and three MAB. Graduate enrollment in fall 2014 was 54; 22 Ph.D., 17 M.S., and 15 MAB. Graduate enrollment in fall 2015 increased to 66; 23 Ph.D., 23 M.S., and 20 MAB. A summary of publications and presentations regarding research is provided in Table 3.

The department has been productive over the past several years in journal publications, abstracts, proceeding papers and technical reports. During FY 2014/15, our publication output declined somewhat, which is a function of the research funding environment and the lower levels of graduate enrollment experienced the past few years. Publications tend to lag the level of graduate degrees conferred given that publications are often a product of graduate student research. We anticipate that publications will increase with the increased graduate enrollment. Appendices C and D contain a comprehensive list of all FY 2014/15 publications and presentations, respectively.

The International Centre for Agricultural Competiveness under the directorship of Dr. Darren Hudson has continued to provide valuable research, analysis and educational input in national and international agricultural policy. The ICAC has provided policy analysis in cotton and general farm bill implementation. Dr. Hudson is routinely asked to provide information and analysis on a wide range of agricultural policy topics. Dr. Hudson was asked to testify before the U.S. House Agricultural Committee regarding global agricultural subsidization.

**Table 1. Department of Agricultural and Applied Economics
Research Expenditures by Source, 1981/82 to 2014/15**

Year	Source			TOTAL*
	State	Federal	Private	
-----Dollars-----				
1981/82	148,983	2,000	27,180	178,163
1982/83	127,105	19,424	19,650	166,179
1983/84	167,660	70,413	29,687	267,760
1984/85	164,292	174,065	68,837	407,194
1985/86	165,413	80,067	33,381	278,911
1986/87	173,392	138,077	54,400	365,869
1987/88	123,265	155,202	22,700	301,167
1988/89	102,134	78,533	0	180,667
1989/90	99,531	57,700	3,000	160,231
1990/91	72,221	25,000	12,525	109,746
1991/92	109,437	40,000	123,475	272,912
1992/93	171,429	75,379	121,825	368,633
1993/94	115,776	130,699	106,250	352,725
1994/95	197,947	60,054	109,686	367,687
1995/96	251,932	145,576	64,500	462,008
1996/97	236,607	104,377	67,400	408,384
1997/98	287,576	116,750	121,232	525,558
1998/99	302,788	116,239	227,016	646,043
1999/00	371,803	126,400	130,705	628,908
2000/01	322,057	203,386	109,734	635,177
2001/02	349,003	457,508	95,508	902,407
2002/03	547,904	787,186	89,321	1,342,474
2003/04	256,145	1,258,791	93,072	1,608,008
2004/05	225,835	1,740,348	104,167	2,070,350
2005/06	281,205	1,406,603	113,416	1,801,224
2006/07	443,437	1,381,152	45,233	1,869,822
2007/08	812,706	942,682	30,167	1,785,555
2008/09	608,033	1,214,264	104,114	1,926,411
2009/10	659,067	1,259,125	32,069	1,950,261
2010/11	659,574	1,117,118	46,810	1,823,502
2011/12	730,582	867,647	91,795	1,690,024
2012/13	716,052	287,427	261,144	1,264,623
2013/14	433,004	520,464	147,768	1,101,236
2014/15	537,015	459,355	87,840	1,084,210

*The total reflects expenditures for the specific research projects (in Appendix A), funding associated with cooperative research projects, and other departmental research activities.

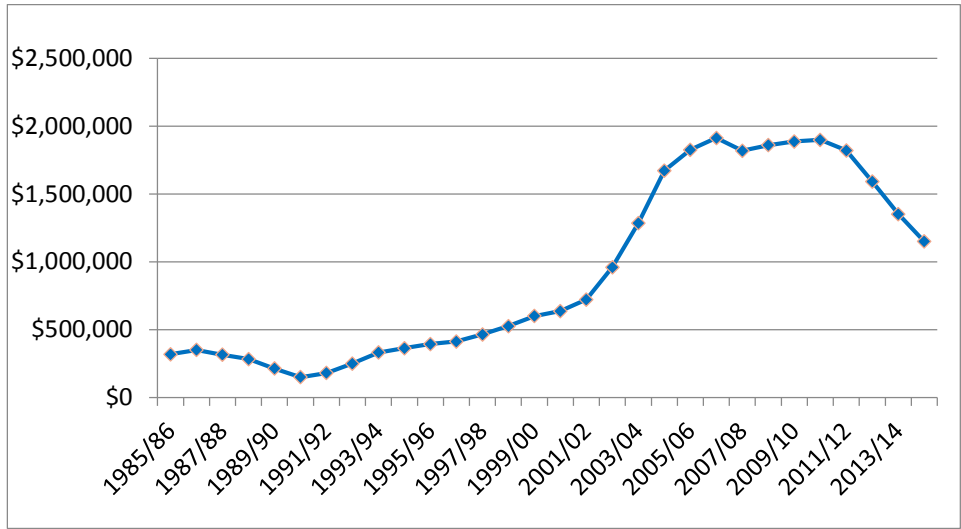


Figure 1. Three Year Moving Average of Total Research Expenditures

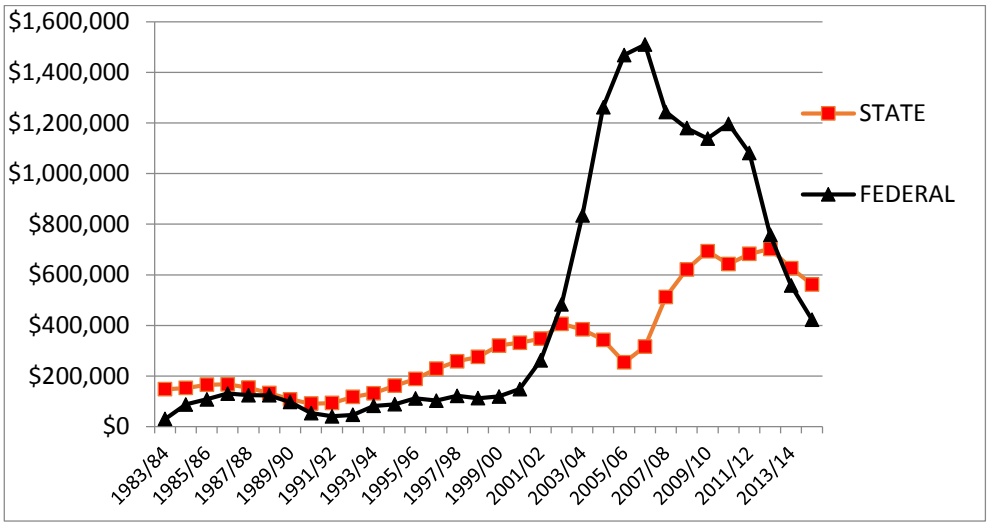


Figure 2. Three Year Moving Average of State and Federal Research Expenditures.

Table 2. Graduate Degrees Awarded, Department of Agricultural and Applied Economics, 1982/83 to 2014/15

Year	Master of Agribusiness	Master of Agriculture	Master of Science	Ph.D.
1982/83	-	1	5	1
1983/84	-	0	3	0
1984/85	-	1	3	1
1985/86	-	3	10	0
1986/87	-	0	8	0
1987/88	-	1	6	3
1988/89	-	1	5	4
1989/90	-	0	5	0
1990/91	-	0	5	0
1991/92	-	1	5	4
1992/93	-	2	4	1
1993/94	-	4	5	3
1994/95	-	1	3	2
1995/96	-	2	5	2
1996/97	-	3	5	2
1997/98	-	0	4	0
1998/99	-	0	4	2
1999/00	-	1	3	0
2000/01	-	0	3	1
2001/02	-	1	4	0
2002/03	-	1	3	2
2003/04	-	0	5	2
2004/05	-	0	4	2
2005/06	-	1	6	1
2006/07	1	0	3	3
2007/08	-	0	4	3
2008/09	-	0	6	1
2009/10	3	1	8	6
2010/11	3	0	6	2
2011/12	4	0	10	5
2012/13	4	0	3	7
2013/14	5	0	2	1
2014/15	3	0	3	1

**Table 3. Department of Agricultural and Applied Economics Publications
And Presentations, 1979/80 to 2014/15**

Year	Journal Articles	Books & Chapters	Technical Res. Repts.	Proceeding Papers	Abstracts	Other Presentations
1979/80	1	0	5	1	2	3
1980/81	3	2	9	4	2	5
1981/82	4	5	10	2	1	4
1982/83	5	6	9	4	3	3
1983/84	5	1	10	6	5	2
1984/85	4	1	19	3	13	6
1985/86	11	4	16	5	13	8
1986/87	6	1	16	8	8	7
1987/88	12	3	9	8	9	10
1988/89	11	3	3	5	5	9
1989/90	9	0	3	4	9	12
1990/91	14	2	4	5	10	19
1991/92	7	1	6	12	11	17
1992/93	9	3	1	9	14	10
1993/94	5	2	15	17	9	7
1994/95	7	1	16	16	19	21
1995/96	10	1	3	28	8	12
1996/97	9	0	14	17	9	22
1997/98	9	0	11	12	4	23
1998/99	18	1	14	11	2	16
1999/00	14	3	16	13	3	12
2000/01	15	3	18	21	1	24
2001/02	16	0	19	18	26	8
2002/03	23	7	14	12	8	4
2003/04	19	1	13	23	11	13
2004/05	16	1	7	16	5	16
2005/06	21	5	16	11	10	33
2006/07	27	2	11	11	7	32
2007/08	20	0	8	16	4	23
2008/09	20	1	10	8	11	42
2009/10	21	2	7	17	14	41
2010/11	28	1	9	19	26	38
2011/12	17	1	2	18	16	46
2012/13	53	1	4	10	20	21
2013/14	23	0	3	5	1	39
2014/15	12	1	2	15	3	47

International Center for Agricultural Competitiveness

The International Center for Agricultural Competitiveness (ICAC) (formerly known as the Cotton Economics Research Institute (CERI)) coordinates and fosters economic research activities on all aspects of agricultural competitiveness within Texas Tech University and with other research entities. The primary focus is on economic matters, but we collaborate and cooperate with other research efforts, both economic and non-economic in their primary intent. ICAC focuses both on conducting research and the dissemination of research results to users. Within ICAC, production and management, processing, manufacturing, transportation, pricing and marketing, and trade and policy analysis are key research issues. The policy component of the program has become a more prominent part of ICAC's activities.

Summary of ICAC Activities

ICAC has been focusing on policy analysis in cotton and general farm bill implementation as well as expanding our sorghum world model to include more regions of the world. Policy continues to be a staple of the center, but we have also expanded work into international agricultural development as well.

Larry Combest Agricultural Competitiveness Endowed Chair

The Larry Combest Endowed Chair in Agricultural Competitiveness (Chair) was endowed and filled in August 2008. Dr. Darren Hudson was named the initial chair holder at that time.

1. The Chair supported two Ph.D. students examining crop insurance provisions and cotton farm optimal insurance choice and the interaction between managers and boards of directors in cooperatives and their performance.
2. Other on-going research is related macroeconomic impacts on agriculture, foreign agricultural subsidies, and edible oil demand in Europe.
3. We continue to be involved in our relationship with the United States Military Academy and are working on the relationship between food security and conflict.

**Thornton Agricultural Finance Institute
and
Charles C. Thompson Chair in Agricultural Finance**

The 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 facilitate public service functions related to agricultural finance and banking. Dr. Phillip Johnson is the Director of the Thornton Agricultural Finance Institute.

In FY 2014/15, the institute conducted activities in both the research and service areas. The following sub-sections summarize the activities in those areas.

Research

The Institute provides a focus for research on important topics in agricultural finance which is a broad area that relates to a number of research projects within the Department of Agricultural and Applied Economics, the College of Agricultural Sciences and Natural Resources and the College of Business Administration. Research projects sponsored by or related to the Institute's mission include:

- An Integrated Approach to Water Conservation for Agriculture in the Texas Southern High Plains (Phase II).
- Application of the Field Print Calculator for Cotton Production in the Texas High Plains
- Adaptable Multiproduct Biorefinery from Cotton Gin Waste

Journal Publications

Farmer, MC, Benson, A., Liu, X., Capareda, S., Middleton, M. 2014. "Feasibility of an Adaptable Biorefinery Platform: Addressing the Delivery Scale Dilemma under Drought Risk." **Journal of Agricultural and Applied Economics**. 45.4: 1-15.

Proceedings

Gillum, M.*, **P. Johnson**. 2015. FieldPrint Calculator: Results from the Texas High Plains. *2015 Beltwide Cotton Conferences Proceedings*. Selected for presentation at the 2015 Beltwide Cotton Conference. Co-sponsored by the National Cotton Council and the Cotton Foundation, January 4-7, 2015, San Antonio, TX.

Technical Reports

North Plains Groundwater Conservation District. 2015. The Texas High Plains Initiative for Strategic and Innovative Irrigation Management and Conservation. Final report for the USDA-NECS Conservation Innovation Grant Contract #69-3A75-11-184, 134 pgs. May 2015.

Presentations

None

Service

The Institute co-sponsored the 42nd Annual Bankers Agricultural Credit Conference in November, 2014, which addressed 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 (Appendix I). The conference is directed by a board of directors made up of representatives from area banks as shown in Appendix I. Dr. Phillip Johnson serves on the Texas Agricultural Cooperative Council (TACC) board of directors. He serves on the Executive Board of Directors, is vice-chair of the Services Section, and a member of the Educational and Member Services Committee. Dr. Johnson participated in numerous TACC activities which included Cooperative Director Development Programs, the Managers Conference, and the TACC Annual Meeting.

Recent Significant Research Findings/Impact Statements
Department of Agricultural and Applied Economics
Texas Tech University

The study “Keeping the Value of the Farm: Expanding Market Opportunities through Regional Branding” whose main goal was to develop and test effective messaging and marketing efforts for a regional food branding program found that:

- Fresh and local were most common assumptions made about a regional food branding logo.
- Farm name and location were selected as the preferred information when advertising local products.
- Results also indicate that consumers’ willingness to pay may be positively impacted by the implementation of in-store local food marketing campaigns.

The study “Trends in E-commerce for the Food Marketing System” found that while e-commerce has influenced the food marketing system, its impact does not appear to have been as dramatic and swift as had been expected. More research is needed in order to better understand the ways in which e-commerce affects agribusinesses and consumers. The study also identified a paucity of e-commerce related statistical data.

The study “Data Sources and Food Demand Estimation: A Comparison of Homescan and Consumer Expenditure Survey Data” found that the elasticities obtained from CEX and Homescan data based demand models are not only statistically different but also economically different. All the own-price elasticities obtained from the CEX data based demand model are more inelastic. The differences in the estimated elasticity values are quite substantial: 37% average difference in the case of Marshallian own price elasticities and 15% average difference in the case of expenditure elasticities.

The study “Regional Location Determinants of Foreign Direct Investment in Morocco” has shown the following:

- Moroccan regions of our sample rely on different factors in draining FDI inflows.
- The market size and the availability of the human capital have a positive impact on draining FDI for all regions.
- The number of the existing firms in a given region has a positive impact on attracting FDI for some regions and a discouraging factor for FDI inflows for others.
- The regional public investment has a positive impact on attracting FDI for some region and an unexpected negative impact for others.
- The lack of consensus and a general pattern is mainly due to the existence of differences in terms of regional economic structures or specializations, FDI motivations, and the geographic positions of regions.

The study “Frequency of Purchase: The Case of Honey in Zhejiang Province in China” has shown the following:

- Sixty percent of surveyed consumers consume honey occasionally; about 18% can be considered habitual consumers (15 times or more per month).
- Among habitual consumers of honey, males are dominant and represent 64% of this category
- Honey purchase frequency is not influenced by age, education, income and occupation
- Thirty eight percent of honey consumers purchased honey for its laxative and relaxing features.

Forthcoming article on international governance accepted in *Social Philosophy and Policy* (the widest circulation English-language philosophy journal).

Forthcoming book chapter on economic methodology in the *Oxford Handbook of Austrian Economics*.

Forthcoming article on entrepreneurship in the wake of the Great Recession forthcoming in the *Independent Review*, coauthored with King's College London Ph.D. student Wolf von Laer. We argue that the slow recovery from the 2008 economic crisis is a result of uncertainty created by government policy, and that this uncertainty has a disproportionately large effect on smaller firms and startups.

Participating in the Free Market Institute's Origins of Economic Freedom and Prosperity project funded by the Templeton Foundation. Drafting a working paper with Diana Thomas of Creighton University on how political entrepreneurs can undermine constraints on government power by developing rules that facilitate political bargains. We identify conditions under which constraints on government power are likely to be undermined.

Preliminary findings indicate that government intervention in agriculture can derail optimal technological development path(s) which in turn can negatively impact long-term agricultural productivity.

Uncertainty regarding the implementation of groundwater use limits in the Texas High Plains can (and indeed have) lead to exactly the opposite result, increased groundwater use.

Policy makers must be aware that when evaluating the potential impacts of groundwater use policies, the evaluation and estimation of the impacts using aggregate (region-wide) versus disaggregate (county-wide) estimates can lead to overestimation or underestimation of total groundwater use.

For the Texas High Plains, time value of money (discount rate) appears to have, at the margin, a smaller impact on groundwater conservation than future prospects of agricultural productivity enhancements through technology development. Specifically (a) the greater the level of discount rate the lower the level of groundwater conservation and (b) the lower the prospects for future agricultural productivity enhancement the lower the likelihood that groundwater

conservation would take place or the higher the level of agricultural productivity enhancement the higher the likelihood that groundwater conservation would take place.

Prevailing hydrological-economic conditions in Hale County (which are representative and applicable to the entire Texas High Plains area) indicate that if the discount rate is lower than or equal to 2% and the level of agricultural productivity enhancement is expected to be greater than 1%, groundwater conservation greater than 12% could result (it could be as high as 42.80%).

For the Texas High Plains, optimally speaking, regardless of the discount rate and agricultural productivity enhancement levels used, the transition from the current condition in which there is a significant proportion of irrigated acreage in cotton production to a mostly dryland production of sorghum (with a small proportion of irrigated corn production, the most profitable irrigated crop) is unavoidable.

The speed of the transition (highlighted above in the Texas High Plains) to dryland production could definitely be influenced by both, the discount rate and the future agricultural productivity enhancement levels used/assumed.

The faster agricultural producers in the Texas High Plains recognize the positive impacts associated with the potential for future agricultural productivity enhancements, the greater the incentive for them to conserve groundwater resources in the present.

Research found that the intrinsic value of groundwater affects adoption of precision farming

Research found that groundwater availability and pumping costs affect cropping patterns in the Southern High Plains of Texas

We estimate the mean willingness to pay (WTP) to restore an acre of a playa lake to be approximately \$4,200. The estimated cost of such a restoration is between \$3,200 and \$4,200. The WTP estimate was obtained through the use of a bound and a half, referendum type, contingent valuation survey of households in Texas.

We find that the marginal value of an acre-inch of water on the Texas High Plains ranges from \$3 to \$25 for irrigated agriculture, from \$26 to \$215 for treated and delivered municipal water (with a low end of \$5-\$7 for acquisition), and \$35 for use in the oil and gas industry.

Appendix A
PROJECTS
2013/14

Project Title	Data Sources and Food Demand Estimation: A Comparison of Homescan and Consumer Expenditure Survey Data
Principal Investigators	Carlos E. Carpio and Tullaya Boonsaeng
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	Total funding \$40,389 (Expenditures 09/01/2014-08/31/2015 \$27,278)
Funding Agency	USDA – Agriculture and Food Research Initiative - Foundational Program
Beginning Date	August 2013
Ending Date	February 2016
Project Objective	This project tries to answer three interrelated questions: 1) Are there any differences between demand model estimates obtained using Homescan data and Bureau of Labor Statistics data? If that is the case, 2) What are the sources of the differences? and 3) Are there procedures currently available that can help to eliminate/reduce measurement error induced biases?
Project Summary and Accomplishments	<p>Demand models play an important role in the analysis and measurement of consumer preferences as well as the evaluation of agricultural and food policy; however, only a small number of demand studies have evaluated the quality, statistical properties and/or the impact of the data on the final results of their analyses. Hence, the main research objective for this project is to evaluate the potential of using publicly available datasets and state of the art econometric methods in lieu of the privately owned Homescan data.</p>

We have completed all the analyses to answer questions number 1) and 2) of the project. Some highlights for the results include:
For question 1): Are there any differences between demand model estimates obtained using Homescan data and BLS data (CEX and CPI data)?

- The elasticities obtained from CEX and Homescan data based demand models are not only statistically different but also economically different.
- All the own-price elasticities obtained from the CEX data based demand model are more inelastic.
- The differences in the estimated elasticity values are quite substantial: 37% average difference in the case of Marshallian own price elasticities and 15% average difference in the case of expenditure elasticities.

For question 2): What are the sources of the differences?

- We found that elasticities obtained using CEX data are not affected by the CPI price index used (monthly, quarterly). We even show that it is possible to estimate the models without CPI data without affecting the results.
- The data collection period does affect the value of elasticities obtained from food demand systems. Thus, part of the observed differences between models estimated using CEX and Homescan data are likely due to the different collection periods.

Keywords

ACNielsen Homescan, food demand elasticities

**Important
Publications and
Presentations**

Project Title	The Supplemental Nutrition Assistance Program and Household Spending: A Flexible Demand System Approach
Principal Investigators	Tullaya Boonsaeng – Texas Tech University Carlos E. Carpio – Texas Tech University Chen Zhen – RTI
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	Total funding \$53,602 (Expenditures 09/01/2014-08/31/2015: \$25,848)
Funding Agency	USDA –Food Assistance and Nutrition Research Program
Beginning Date	October 2013
Ending Date	July 2016
Project Objective	The research objectives for this project are: 1) to evaluate the effect of SNAP on households’ expenditures on food and nonfood items, and 2) to analyze the influence of location, economic conditions, and demographic characteristics effects on households’ allocation of expenditures on food and nonfood items.
Project Summary and Accomplishments	The main goal of this was to examine the impact of the SNAP program on the allocation of food and nonfood spending expenditures across six subgroups: food, utilities, apparel, transportation, medical care, and other nonfood spending. The empirical analysis is being conducted using a consumer demand approach instead of the traditional Engel curve approach used to evaluate the effect of SNAP participation on household spending. . Endogeneity and measurement error of the SNAP participation variable and endogeneity of total expenditures are being accounted for with the use of specialized econometric procedures.
Keywords	Measurement error, binary variable, generalized method of moments, bounds
Important Publications and Presentations	

Project Title	Keeping the Value of the Farm: Expanding Market Opportunities Through Regional Branding
Principal Investigators	Carlos E. Carpio, Texas Tech University Tullaya Boonsaeng, Texas Tech University Leah Mathews, University of North Carolina-Ashville Charlie Jackson, Appalachian Sustainable Agricultural Project Allison Perret, Appalachian Sustainable Agricultural Project Katie Descieux, Appalachian Sustainable Agricultural Project
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	TTU component: \$124,918 (Expenditures 09/01/2014-08/31/2015: \$18,694)
Funding Agency	USDA Agriculture and Food Research Initiative –Agricultural Economics and Rural Communities
Beginning Date	July 2013
Ending Date	December 2015
Project Objective	The long-term goals of this project are to enhance and expand economic opportunities for small and medium-sized farms located in Western North Carolina. To support this goal, this project integrates research and extension activities to develop and test local food messaging that will ultimately impact the purchasing practices of consumers.
Project Summary and Accomplishments	<p>The main goal of this study was to develop and test effective messaging and marketing efforts for the Appalachian Grown™ regional branding program. Specific objectives included: 1) The design and evaluation of messages and promotional materials marketing Appalachian Grown Products; 2) Evaluation of the impact of an Appalachian Grown marketing campaign in grocery stores in Western North Carolina.</p> <p>Consumers surveys used to design the marketing campaign and messaging revealed that: a) Most consumers are familiar with the Appalachian Grown logo but not all use it to find local products; b) Fresh and local were most common assumptions made about the logo; and c) Farm name and location were selected as the preferred information when advertising local products.</p> <p>Results from consumers surveys used to measure the impact of the regional branding campaign indicated a statically significant positive effect in one of the two stores where the campaign was implemented. In the store where the campaign was found to have a positive impact, the marketing campaign was found to increase consumers’ willingness to</p>

pay for locally grown products by about 4%. Our results indicate that consumers' willingness to pay may be positively impacted by the implementation of in-store local food marketing campaigns.

Keywords

Local foods, contingent valuation, food marketing

**Important
Publications and
Presentations**

Project Title	Trends in E-Commerce for the Food Marketing System
Principal Investigators	Carlos Carpio and Kelly Y. Lange
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2014
Ending Date	June 2015
Project Objective	The purpose of this study was to assess the current status and impact of e-commerce in the food marketing system.
Project Summary and Accomplishments	<p>E-commerce has emerged as a viable option for connecting agribusinesses and consumers within the food marketing system. We review the academic literature related to adoption and use of computers and the Internet by agribusinesses and the economic impact of e-commerce for these businesses. The review also covers aspects related to the importance of consumers' e-commerce food purchases, the factors affecting its usage, and some new developments in the use of e-commerce to market food products using social media and mobile marketing.</p> <p>We conclude that while e-commerce has influenced the food marketing system, its impact does not appear to have been as dramatic and swift as had been expected. More research is needed in order to better understand the ways in which e-commerce affects agribusinesses and consumers. The review also identified a paucity of e-commerce related statistical data.</p>
Keywords	Food marketing, agriculture, online food purchases, internet marketing, social media, mobile marketing
Important Publications and Presentations	

Project Title	Food Demand and Food Security in El Salvador
Principal Investigators	Luis Sandoval-Mejia and Carlos Carpio
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	June 2014
Ending Date	Ongoing
Project Objective	This project has two objectives: 1) To analyze the effect of prices, income, and other socio-demographic characteristics on food choices in El Salvador, and 2) Evaluate how income and price shocks affect food demand and food security in the country.
Project Summary and Accomplishments	The project uses household food expenditure data from the 2013 and 2014 Multiple Purposes Household Survey (EHPM) from El Salvador. Additional information on prices and price indexes were collected from several government statistical agencies. We have finalized data management and estimated some preliminary food demand models. Preliminary results show inelastic demand for corn, beans and eggs and elastic demand for rice, chicken and sugar.
Keywords	Food demand, household expenditure surveys, El Salvador, food security
Important Publications and Presentations	

Project Title	Economic Analysis of Alternative Livestock Production Systems in Honduras
Principal Investigators	J. Ricardo Gomez (student), Carlos E. Carpio, Mindy Brashears, and Sara Trojan
Departmental Involvement	Agricultural and Applied Economics, Animal and Food Science
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2014
Ending Date	Ongoing
Project Objective	This study has two main objectives: 1) Estimate and compare the profitability of three beef cattle production systems in Honduras, and 2) To create an Excel-based beef cattle profitability calculator for Honduran producers.
Project Summary and Accomplishments	<p>The diminishing worldwide beef cattle supply has severely affected small countries such as Honduras. Beef cattle producers in the country have lost interest in finishing their cattle for the local meat market due to several reasons including high feed prices, inefficient production systems, and a strong demand for cattle outside the country. Therefore, both the Honduran meat industry and the country's food security are at risk.</p> <p>This study is one of the three components of a long term project between Texas Tech University and CAFOGAH (Honduran Livestock Development Corporation). The project overall goal is to evaluate alternative beef production systems adapted to the particular conditions faced by Honduran producers. The three major components of the project include: 1) Formulation of diets and animal management protocols; 2) Microbiological and meat quality analysis; and 3) Analysis of profitability and costs of the different production systems.</p> <p>At this point we have collected most of the data necessary for all the economic analyses and constructed a preliminary version of the Excel based beef cattle profitability calculator.</p>
Keywords	Economic analysis of beef production, Beef cattle profitability calculator, Honduras

Project Title	Transmission Mechanism of Monetary Policy: The Case of European Union Banks
Principal Investigator/s	Hanan Shkokani and Benaissa Chidmi
Departmental Involvement	Economics, and Agricultural and Applied Economics
Funding Type	N/A
Funding Amount	N/A
Beginning Date	September 2014
Ending Date	August 2015
Project Objective	To examine the monetary policy reaction function for Jordan by analyzing three expanded models of the Taylor rule; the within-month rule, the backward-looking rule, and the forward-looking rule
Project Summary Accomplishments	<p>The aim of this paper is to employ disaggregated data to investigate whether there are distributional effects of monetary policy on banking activities (loans, holdings,...) of different European banks with different characteristics across the European Monetary Union countries.</p> <p>Unlike United States, where there has been numerous studies of transmission mechanism of monetary policy, similar studies are lacking at the European Union (EU) countries. In fact, to the best of our knowledge, the limited number of studies cover the period before 1999, the year that witnessed the implementation of the third stage of the European Monetary Union (EMU) through the introduction of the Euro as a new single European currency.</p>
Keywords	Transmission mechanism, monetary policy, European monetary union,
Important Publications and Presentations	Work in Progress

Project Title	Regional Location Determinants of Foreign Direct Investment in Morocco
Principal Investigator/s	Youssef Ettoumi and Benaissa Chidmi
Departmental Involvement	Mohamed V University, Economics and Agricultural and Applied Economics
Funding Type	N/A
Funding Amount	N/A
Beginning Date	September 2014
Ending Date	August 2015
Project Objective	To analyze the factors that affect the location choice for foreign direct investments across different Moroccan Regions.
Project Summary Accomplishments	Although foreign direct investments (FDI) have contributed to boost the Moroccan economy, these inflows are still concentrated in few developed regions. Indeed 4 regions out of 16 concentrate over 80% of FDI. This geographical concentration of FDI can lead to the widening of regional inequalities. Given these facts, one important question arises: What are the determining factors that influence multinational firms' location choices across Moroccan regions? In this article, we try to give an answer to this question by analyzing the location choice of industrial firms in six regions through the period 1992-2011. We investigate the role of 4 macroeconomic determinants: Agglomeration economies, market size, human capital and infrastructure.
Keywords	Foreign direct investments, agglomeration economies, regions, Morocco
Important Publications and Presentations	Paper published in Journal of Humanities and Social Science. Vol. 20, Issue 3, March 2015.

Project Title	Foreign Direct Investments in Some Middle-Eastern and North-African Countries
Principal Investigator/s	Youssef Ettoumi and Benaissa Chidmi
Departmental Involvement	Mohamed V University, Economics and Agricultural and Applied Economics
Funding Type	N/A
Funding Amount	N/A
Beginning Date	September 2014
Ending Date	August 2015
Project Objective	To analyze and estimate the effect of several macroeconomic, developmental, and institutional factors on the flow of FDI to some Middle-Eastern and North-African (MENA) countries
Project Summary Accomplishments	The objective of this paper is to analyze and estimate the effect of several macroeconomic, developmental, and institutional factors on the flow of FDI to some Middle-Eastern and North-African (MENA) countries, namely Morocco, Algeria, Tunisia, Egypt, Jordan, and Turkey. The estimation procedure takes advantage of the richness of the data and employs the panel data procedures that are consistent (fixed effects) and efficient (random effects). This work contributes to the existing literature in many aspects. First, it is one of the few studies that analyzes the FDI distribution across different countries that pertain to the same geographical region but each country is still characterized by many specificities (energy rich countries, agriculture and tourism oriented countries, and so on.) Second, previous studies dealt with the FDI for single countries and therefore ignored the interconnection that might exist between countries of the same region. We hypothesize that these countries compete for the same limited FDI funds.
Keywords	Foreign direct investments, MENA, panel data.
Important Publications and Presentations	In preparation for submission to Regional Economics

Project Title	Frequency of Purchase: The Case of Honey in Zhejiang Province in China
Principal Investigator/s	Benaissa Chidmi and Cuiying Zhang
Departmental Involvement	Agricultural and Applied Economics and Zhejiang University
Funding Type	N/A
Funding Amount	N/A
Beginning Date	September 2014
Ending Date	August 2015
Project Objective	To determine the influencing factors for the frequency of purchase of honey, and to establish the differences of behavior between different groups of ages, gender, income, education levels and occupation in buying honey in Zhejiang Province, China.
Project Summary Accomplishments	The purchase frequency is different between male and female. Male gender seems to dominate the “habitual consumers” (high frequency). Approximately 64% of frequent consumers are male. Honey purchase frequency seemed not to be influenced by consumers’ age, education, income and occupation. Honey consumption tends to rise with education, but to not in a significant way.
Keywords	Frequency of purchase, multinomial logit, honey.
Important Publications and Presentations	In preparation for submission to Journal of Marketing Research.

Project Title	Factors that Affect Student Course Evaluation Score
Principal Investigators	Emmett Elam
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2014
Ending Date	August 2015
Project Objective	Determine the impact of student learning, course grade, and the amount of work required in a course on the student evaluation score for selected courses.
Project Summary and Accomplishments	Student evaluation of a course depends on the quality of a course and what the student learns in a course, but other factors influence student evaluation such as the course grade and the amount of work required in a course. A regression model was specified to measure the influence of student learning, course grade, and course work level on student evaluation scores. A dataset is being assembled to estimate the model.
Keywords	Student course evaluation, instructor evaluation, course grade, course workload.
Important Publications and Presentations	None

Project Title	Adaptable Multiproduct Biorefinery from Cotton Gin Waste
Principal Investigators	Michael C. Farmer
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$50,000
Funding Agency	Thornton Agricultural Finance Institute
Beginning Date	April 2013
Ending Date	May 2017
Project Objective	Assess opportunities to use cotton gin waste at gins in West Texas to produce simultaneously electricity, ammonia and bio-oil based fertilizer at the same facility.
Project Summary and Accomplishments	<p>This work assesses the potential for a median-sized cotton gin in West Texas to produce multiple bio-products from Gin Residuals. Generally bioenergy plants are very large size; and the majority of plants produce a single product.</p> <p>Yet these large sized operations tend to sell their products into large scale commodity markets for typically low and highly variable prices. The advantage of a small plant operating closer to the ‘rural interior’ where agricultural producers operate can offer several higher valued, sometimes niche market, opportunities if the bio-products produced are also sold into the local rural and agricultural markets.</p> <p>In West Texas, for example, delivering electricity in summer closer to the locations where irrigators operate allows a local bioelectricity producer to take advantage of high daily (or even spot) summer electricity prices and also ‘lose’ a smaller share of what is produced to line transportation resistance. Other markets, such as fertilizers and diesel, can realize higher prices by off-setting transport and storage costs. Also other products made in a multiproduct bio-refinery use some of the same equipment required to generate electricity.</p> <p>Analyses focus on the joint risks of drought (low yields), price uncertainty of every product including ginned cotton, and the portfolio (joint) price risks among these several products. Most prices are not significantly correlated and price relationships appear stationary. To offset yield risks which can strand capital in poor production years, a 2MW power plant coupled with an ammonia fertilizer unit generates an ROI of 28% under full financing and a 48% ROI under 50% financing.</p>
Keywords	Biorefinery, gasification, biowaste, bioenergy, market cointegration analysis

**Important
Publications and
Presentations**

Tangaoui, A. November, 2015. Feasibility Study of a Multiproduct Biorefinery in West Texas from using Cotton Gin Waste. Dissertation, TTU.

Farmer, MC, Benson, A., Liu, X., Capareda, S., Middleton, M. 2014. "Feasibility of an Adaptable Biorefinery Platform: Addressing the Delivery Scale Dilemma under Drought Risk." **Journal of Agricultural and Applied Economics**. 45.4: 1–15.

Project Title	Structural Models of the U.S. and World Fiber Markets (Cotton FAPRI)
Principal Investigators	Darren Hudson
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$300,000
Funding Agency	
Beginning Date	September 2014
Ending Date	August 2015
Project Objective	To estimate and maintain a structural econometric model of U.S. and global fiber markets to be used in policy and market analysis.
Project Summary and Accomplishments	<p>This project is a continuation of the FAPRI-consortium model that has been a mainstay of cotton policy analysis both nationally and internationally. We continue to update, revise, and refine the model and utilize the model for policy analysis and baseline projections. Results of the baseline and policy analysis have been presented to Congressional staff, USDA researchers, and private industry, and has been featured in popular press outlets such as Bloomberg.com, <i>Southwest Farm Press</i>, and other regional and local media. Several critical research projects were completed or are underway related to this project:</p> <ol style="list-style-type: none"> 1. Impacts of ethanol policy on cotton acreage in the Texas High Plains 2. Global baseline projections 3. Impacts of Chinese currency depreciation
Keywords	Cotton, structural models, forecasting, international markets, policy analysis
Important Publications and Presentations	

Project Title	The Impacts of Biofuels on the Infrastructure of the U.S. Cotton Industry
Principal Investigators	Darren Hudson
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$8,000
Funding Agency	
Beginning Date	January 2015
Ending Date	December 2015
Project Objective	To examine the impacts of changing cotton acreage resulting from biofuels mandates and other reasons on the structure and costs of cotton ginning in the United States.
Project Summary and Accomplishments	Currently, we are examining the impacts of the placement of an ethanol plant in Levelland, TX on regional cotton acreage using a spatial econometric model.
Keywords	Cotton, cotton gins, policy analysis
Important Publications and Presentations	

Project Title	Emerging Cotton Issues in World Policy
Principal Investigators	Darren Hudson
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$3,000
Funding Agency	
Beginning Date	January 2015
Ending Date	December 2015
Project Objective	To examine and document the role of internal subsidization of cotton production in global cotton markets.
Project Summary and Accomplishments	As a part of this project, we have completed and released a revised version of the “Subsidy Handbook” that documents the use of differing trade policies and internal subsidization across global agriculture. In addition, we began work on country specific analyses of policies and programs. Finally, testimony was provided to Congress on foreign agricultural subsidies.
Keywords	Cotton, subsidies, policy analysis
Important Publications and Presentations	

Project Title A Comparative Analysis of the Economics of Cotton Farming: Subsidies and Production Costs of the World’s Leading Producers

Principal Investigators Darren Hudson

Departmental Involvement Agricultural and Applied Economics

Funding Amount \$7,500

Funding Agency

Beginning Date January 2015

Ending Date December 2015

Project Objective To examine and document differing production costs, subsidies, and market outcomes in the world’s leading cotton producing countries.

Project Summary and Accomplishments We began in-depth country analyses of cotton and other agricultural production systems, markets, and subsidies.

Keywords Subsidies, agriculture, costs of production, marketing systems, policy analysis

Important Publications and Presentations

Project Title	Larry Combest Endowed Chair Research
Principal Investigators	Darren Hudson
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$19,233
Funding Agency	
Beginning Date	September 2014
Ending Date	August 2015
Project Objective	To conduct research relevant to the long-term competitiveness of Texas and U.S. agriculture.
Project Summary and Accomplishments	This project supports a number of projects related to agricultural competitiveness and other research as the need arises. Currently, the Chair is supporting one Ph.D. student's research on macroeconomic impacts on agriculture
Keywords	Agricultural competitiveness
Important Publications and Presentations	

Project Title	Creating a Searchable Database of Foreign Subsidies
Principal Investigators	Darren Hudson
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$10,000
Funding Agency	
Beginning Date	January 2015
Ending Date	December 2015
Project Objective	To develop a searchable database of foreign agricultural subsidies.
Project Summary and Accomplishments	The database is now online and regular modifications are being made. It is publicly available at the ICAC website.
Keywords	Foreign agricultural subsidies, database
Important Publications and Presentations	

Project Title	Texas High Plains Initiative for Strategic and Innovative Management and Conservation
Principal Investigators	Phillip Johnson, David Doerfert, Steve Maas, and Rick Kellison – TTU Steve Walthour - NPGD
Departmental Involvement	Agricultural and Applied Economics, Agricultural Education and Communications, Plant and Soil Science
Funding Amount	Expenditures 9/14 – 5/15 \$49,093 (AAEC \$12,273) Total Expenditures 9/11 – 5/15 \$399,886 (AAEC \$99,972)
Funding Agency	USDA-NRCS - \$257,000; HPUWCD \$125,000: and Netafim \$17,000 (AAEC part 25% ~ \$100,000)
Beginning Date	September 2011
Ending Date	May 2015
Project Objective	The <i>purpose</i> of the Conservation Innovation Grant (CIG) is to demonstrate strategic irrigation and crop system management technologies and practices which will result not only in water savings and best practices that are applicable nationwide to regions facing similar resource concerns. The <i>primary objective</i> is to quantify water savings that can be realized from strategic irrigation management.
Project Summary and Accomplishments	This project is a joint effort with the North Plains Groundwater Conservation District. The 2014 crop year was the 3 rd and final year of the project. Eight producers with a total of 1,000 acres in 12 sites (8 pivot and 4 SDI) have been included in the project. Irrigation monitoring equipment from NetIrrigate® was installed on the sites which allowed for real time monitoring and data collection of water flow meters on the systems, pivot system location in the field, sub-surface drip zone monitoring, and rainfall amounts. Soil moisture probes have been installed AquaSpy®, John Deere Field Connect® and Aqua Check® to collect data and allow for monitoring of soil moisture on a daily basis by remote access communication. The project co-sponsored the First Annual “Water College” which had approximately 150 in attendance. A final project report was submitted to the NRCS in June 2015.
Keywords	Irrigation, water policy, resource allocation
Important Publications and Presentations	

Project Title	Application of the Field Print Calculator for Cotton Production in the Texas High Plains	
Principal Investigators	Phillip Johnson	
Departmental Involvement	Agricultural and Applied Economics	
Funding Amount	Expenditures 11/14 – 5/15	\$12,789
	Total Expenditures 11/14 – 5/15	\$12,789
Funding Agency	Cotton Foundation	
Beginning Date	June 2014	
Ending Date	May 2015	
Project Objective	The objectives of this project are to (1) expand the scope of the pilot project applying the FieldPrint Calculator to the TAWC data to include sites across the Texas High Plains region; (2) evaluate how the FieldPrint metrics change with adoption of different production practices such as tillage and irrigation methods; and (3) evaluate the relationship between the FieldPrint metrics and crop profitability.	
Project Summary and Accomplishments	The FieldPrint Calculator was used to evaluate field data from the TAWC project for the crop years 2006-2014. Data for the CIG sites were incorporated into the analysis for 2014. A preliminary analysis of the relationship between the sustainability metrics and profitability was completed and presented at the 2015 Beltwide Cotton Conference.	
Keywords	FieldPrint Calculator, sustainability	
Important Publications and Presentations		

Project Title	An Integrated Approach to Water Conservation for Agriculture in the Texas Southern High Plains (Phase II)
Principal Investigators	Chuck West, Rick Kellison, Phillip Johnson, Eduardo Segarra, Steve Frazee, Rudy Ritz, Courtney Meyers, Steve Maas, Jeff Pate and Steven Klose
Departmental Involvement	Agricultural and Applied Economics, Agricultural Education and Communication, Plant and Soil Science
Funding Amount	Expenditures 9/14 – 8/15 \$54,940 Total Expenditures 1/14 – 9/15 \$73,282
Funding Agency	Texas Water Development Board - \$198,160 (AAEC part of \$3.6 million)
Beginning Date	January 2014
Ending Date	August 2020
Project Objective	The overall objective of this project has been to develop environmentally sustainable and economically feasible integrated production systems that will ensure the viability of agricultural activities in the Texas High Plains.
Project Summary and Accomplishments	This represents Phase II of the TAWC project. The primary responsibility of the Economic Task is to develop and maintain profitability records along with various agronomic and economic components for each demonstration site and system within the project. These cost and return analyses aid in the understanding of how irrigation interacts in the profitability of the systems and the management of agronomic options that are available for producers to manage water resources while producing sustainable profits. In addition to the annual cost and return budgets for each site, additional analyses will be conducted within the Economic Task. These analyses relate to the financial viability of producers with declining water availability and/or water use restrictions imposed by regional water policies.
Keywords	Water
Important Publications and Presentations	The First Annual “Water College” was held in January 2015 with approximately 150 in attendance.

Project Title Preparing the Next Generation of Agricultural Professionals:
Sustaining Agriculture through Business Continuity and Financial
Planning

**Principal
Investigators** Kelly Lange

**Departmental
Involvement** Agricultural and Applied Economics

Funding Amount \$260,687

Funding Agency USDA NIFA NLGCA Program

Beginning Date October 2015

Ending Date September 2018

Project Objective Develop new course offerings and outreach programs in personal
financial planning and farm succession for agribusinesses. Joint project
with the University of Tennessee at Martin.

**Project Summary
and
Accomplishments** Proposal Submission Pending

Keywords Farm succession, personal financial planning

**Important
Publications and
Presentations**

Project Title	The Future of Farms: Educating and Training the Next Generation
Principal Investigators	Kelly Lange, Valerie Hlavaty
Departmental Involvement	Agricultural and Applied Economics, Hospitality and Retail Management
Funding Amount	TBD
Funding Agency	TBD
Beginning Date	TBD
Ending Date	TBD
Project Objective	Conduct surveys/focus groups to determine the skills and capabilities that young agricultural professionals must possess to successfully develop, grow, and sustain agricultural production enterprises. Based on research findings, educational/outreach/internship programs will be developed to provide training to young professionals for expertise development in skills areas identified.
Project Summary and Accomplishments	Proposal Submission Pending
Keywords	
Important Publications and Presentations	

Project Title	Do SNAP Recipients Get the Best Prices?
Principal Investigators	Conrad Lyford, Carlos Carpio and Tullaya Boonsaeng
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$39,776 (9/14 - 8/15, \$19,285)
Funding Agency	USDA – Economic Research Service, Food APS Research Initiative
Beginning Date	July 2014
Ending Date	June 2016
Project Objective	The main objective of this project is to analyze and quantify the factors that affect food prices paid by households participating in the Supplemental Nutrition Assistance Program (SNAP) program (formerly known as the Food Stamps Program).
Project Summary and Accomplishments	<p>This project will use the recently collected USDA's National Household Food Acquisition and Purchase Survey, the first nationally representative survey of American households gathering comprehensive data about household food purchases and acquisitions.</p> <p>The first step of the analysis will involve the calculation of a price index—also called an expensiveness index. This index compares the cost of a household's food basket at average prices to the cost actually paid by the household. The second step of the analysis will involve regressing the expensiveness index on a set of explanatory variables including income, demographic characteristics (including SNAP participation), and factors characterizing the competitiveness and structure of the retail market. Specialized econometric methods will be used to address the endogeneity of SNAP participation.</p> <p>Key policy implications from the project will be:</p> <ol style="list-style-type: none"> (1) Facilitate the development and targeting of SNAP-Ed efforts. (2) Provide information for the assessment of SNAP allotments. (3) Develop information regarding the relative importance of demographic factors and the food environment on the prices paid by low income households. <p>At this point, data from the proprietary data set is available and we are in process of putting together the economic model to achieve project outcomes.</p>
Keywords	SNAP, prices, health education

Project Title	BHEARD Ghana Program
Principal Investigators	Conrad Lyford
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$304,453 (9/14 - 8/15, \$76,113)
Funding Agency	USAID/Michigan State University
Beginning Date	August 2014
Ending Date	July 2018
Project Objective	The United States Agency for International Development (USAID), in partnership with the Association of Public and Land-grant Universities (APLU) and the International Maize and Wheat Improvement Center (CIMMYT) in Mexico, has selected Michigan State University (MSU) to implement the Feed the Future Borlaug Higher Education Agricultural Research and Development (BHEARD) Program. Honoring the legacy of Nobel Peace Prize Laureate Norman Borlaug, this is a major new effort to increase the number of agricultural scientists and strengthen scientific institutions in developing countries. The program will support long-term training of agricultural researchers at the master's and doctoral levels and will link scientific and higher education communities in Feed the Future countries and the United States. The Texas Tech component of this is two fully funded students from Ghana including fieldwork.
Project Summary and Accomplishments	The two PhD students from Ghana are currently proceeding well in our TTU-Agricultural Economics program. We are in process of compiling data from several secondary sources that should form a key basis for future publications and dissertation research by the students. These data sets include official government statistics from Ghana for health, nutrition, and economic data as well the baseline data from Feed the Future. The students are in process of writing their first peer reviewed journal submission.
Keywords	USAID, Ghana, food security, Feed the Future

Project Title	Using Behavioral Economics to Achieve Improved Healthy Behavior Outcomes in Breast Cancer Survivors
Principal Investigators	Conrad Lyford, Agricultural and Applied Economics, TTU Chwan-Li (Leslie) Shen, Pathology, TTUHSC Autumn Shafer and Rebecca Ortiz, Public Relations, TTU Candy Arnetz, Surgery, TTUHSC Shengping Yang, Pathology, TTUHS
Funding Amount	\$15,000 (9/14 - 8/15, \$7,000)
Funding Agencies	The Obesity Research Cluster/Texas Tech University Laura W. Bush Institute for Women's Health
Beginning Date	January 2015
Ending Date	July 2016
Project Objective	Preventing or reducing obesity is one factor that has been hailed as a way to improve quality of life, reduce recurrence, and increase survival rates among breast cancer survivors. An experienced team of multi-disciplinary researchers has developed an innovative and unique approach to encourage enhanced nutrition and exercise behaviors in this population using principles of behavioral economics. In particular, the use of social norms or exemplars has been shown in other applications to be effective, and if successful in this population could be inexpensively scaled up for widespread adoption. The proposed pilot study develops a system of text messages for social/mobile media that will provide ongoing reinforcement of desired behavior in breast cancer survivors. These messages would focus on achieving compliance with the expert-developed nutrition and exercise recommendations of the American Cancer Society. This pilot data would be essential to achieving success with targeted funding agencies including NCI, NIH, ACS, AICR, and CPRIT.
Project Summary and Accomplishments	The project has completed key steps including: the behavioral survey, participant pre-screening, survey formatted for online use, recruiting materials, IRB application submitted to TTUHSC for full review board, and IRB application modified according to TTUHSC IRB comments. At this point, the IRB has approved the project, and we will begin recruiting for the project.
Keywords	Obesity research cluster, behavioral economics, cancer survivors

Project Title	Assessing Potential Chinese Demand for Grain Sorghum
Principal Investigator	Jaime E. Malaga and Haiyan Wang
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	None.
Funding Agency	
Beginning Date	January 2014
Ending Date	December 2016
Project Objective	To estimate the parameters of the Chinese derived demand for grain sorghum and use them to forecast potential sorghum imports.
Project Summary and Accomplishments	China has been showing an impressive growth on consumption of animal protein which has resulted on a rapidly increasing derived demand for feed grains. Corn is the key feed crop for China; however, government policies have boosted domestic corn prices above international levels. This is not the case of grain sorghum which is a close corn substitute. USDA estimates that in recent years consumption of sorghum in China expanded almost ten times and in August 2013 China, for the first time, imported sorghum from the United States for feed use. These facts indicate that China is becoming a large market of feed grain where sorghum is a close and cheaper substitute for corn. The objective of this research is to estimate the parameters of China's sorghum derived demand and use them to forecast the Chinese potential demand of grain sorghum in the near future. A derived demand model will be used to determine the effect of the changes in livestock production, feed ratios, corn prices and government policies on sorghum demand and own-and cross-price elasticities will be estimated. Official U.S. and Chinese data sources are being used. Results of this study will be eventually incorporated into the TTU Sorghum Supply, Demand and Trade Model in order to provide improved baseline forecasts of the world sorghum market variables.
Keywords	Sorghum, China, international trade

Project Title	Understanding Chinese Corn and Sorghum Policies and their Implications for U.S. Exporters
Principal Investigators	Jaime E. Malaga and Haiyan Wang
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	January 2015
Ending Date	December 2016
Project Objective	The objective of this project is to conduct an analysis to estimate the effects of Chinese policies on the corn/sorghum price differential that allows China to import large amounts of sorghum for feed use.
Project Summary and Accomplishments	The large volume of sorghum imports for feed use since 2013 made China the largest destination for sorghum exporters. Before year 2013, China only imported small amounts of sorghum for feed use primarily from Australia. However, China's import of sorghum in 2013 increased 114% compared to 2012 and continues growing in recent years. The main reason behind China's sorghum import surge since 2013 seems to be related to their specific domestic and trade policies affecting the corn sector. In order to encourage the production of corn, Chinese farmers receive high prices from production subsidies and government purchases. The policies lead to relative high domestic corn prices providing an advantage to cheaper imported corn and sorghum. Many private livestock industries shift from domestic corn to imported corn and sorghum. However, China has in place a TRQ (tariff rate quota) on corn and the government also holds a very restrictive policy on GMO corn. As a result, more and more livestock industries increased their purchases of low-priced imported sorghum which has no TRQ or GM restrictions. China official data in April 2015 shows that the price of imported sorghum is 300-400 yuan/ton (Chinese currency) cheaper than domestic corn. If the Chinese government maintains the current policies, the price advantage of imported sorghum may continue. A modification of these policies may have an important impact on U.S. sorghum exports to China
Keywords	Sorghum, China, international trade, price

Project Title	U.S.-Australia Competition for the Japanese Sorghum Market
Principal Investigators	Jaime E. Malaga and Kazuyoshi Ishida
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2013
Ending Date	December 2014
Project Objective	To assess the factors behind recent declining of U.S. market share of the Japanese sorghum market in favor of Australia.
Project Summary and Accomplishments	The U.S. held the largest share in the Japanese sorghum market for 20 years. However, in recent years Australia's share of the same market has been constantly growing to claim the top position despite the fact that the U.S. sorghum price is cheaper in that country. The ratio of U.S. vs Australian sorghum prices in Japan during the last 20 years does not show too much variability, which seems to imply that the U.S. sorghum has not lost price competitiveness in the Japanese market. Factors other than the price may be affecting the market share of the U.S. sorghum in Japan. Therefore, our research objective is to confirm, using historical data (from U.S. and Japanese sources) and sound methodology, that grain quality differential might be the variable explaining the loss of U.S. market share that country. This analysis will be helpful in terms of allowing the U.S. sorghum producers to regain market share on the important Japanese market. Parameters have been estimated and results have been presented at several professional meetings. A manuscript for publication has been submitted. of the Agricultural and Applied Economics Association (AAEA) in.
Keywords	Grain sorghum, Japan, international trade
Important Publications and Presentations	

Project Title	International Partial Equilibrium Model of Sorghum Supply, Demand and Trade
Principal Investigators	Jaime E. Malaga and Kazuyoshi Ishida
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	January 2015
Ending Date	August 2016
Project Objective	To update and expand the TTU world sorghum econometric model which will provide the US sorghum industry with information relevant to domestic and international policy strategies pertaining to the future of grain sorghum.
Project Summary and Accomplishments	Texas Tech University developed a supply/demand/trade partial equilibrium econometric model with USDA funding in the past. Such model needed to be updated with more current data and expanded to include more recent developments like the surge of China as a main destination market and Australia as a growing exporter. The original model included only the US, Mexico and Japan, so new estimations on parameters of other countries need to be performed and incorporated in the model in order to provide more relevant forecasting and simulation. The model will then be able to forecast ten years of impacts on future sorghum supply, demand, and trade of alternatives scenarios of key exogenous variables. US supply equations were separated by regions (Texas, Kansas, and other states) A Japanese demand equation was re-estimated and expanded future simulations will include impacts of corn prices livestock production, foreign policies, sorghum yield improvements, expansion of exports to other countries, and derived demand from the US ethanol industry. A preliminary result of the expanded model was selected for presentation at the 2015 Meetings of the Agricultural and Applied Economics in San Francisco
Keywords	Grain sorghum, international trade, trade forecasting models
Important Publications and Presentations	

Project Title	An Integrated Approach to Compare Sorghums Lines over a Range of Irrigation Levels in West Texas
Principal Investigators	Olga Murova (co-principal)
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$34,997
Funding Agency	Advanta US
Beginning Date	September 2014
Ending Date	May 2015
Project Objective	Compare costs of production of sorghums lines over a range of irrigation levels, and estimate efficiency of production among GMO seeds and alternative irrigation regimes.
Project Summary and Accomplishments	Results of this study offer economic comparisons between production of GMO sorghum and corn. The results may be useful and convincing for some individual producers in their decision making to switch from corn to sorghum and to use Advanta's seeds.
Keywords	GMO seeds, corn, sorghum, cost comparison, efficiency of production
Important Publications and Presentations	

Project Title	Feasibility Study of a Corn Wet Mill Processing Plant in Dimmitt, Texas, USA
Principal Investigators	Olga Murova and Conrad Lyford
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	November 2014
Ending Date	April 2015
Project Objective	Conduct a feasibility study of a non-producing corn wet mill processing plant in Dimmitt, Texas
Project Summary and Accomplishments	The study included the following: 1) current non-GMO corn market analysis, 2) an analysis of current location and readiness for production of existing plant, 3) an evaluation of sufficiency of supply and actual contracts with nearby producers of corn, 4) an examination of distribution of final product domestic and international markets, 5) profit estimation under two possible scenarios, and 6) findings and recommendations to investors
Keywords	GMO and non-GMO corn, wet mill processing plant, feasibility study, market analysis
Important Publications and Presentations	

Project Title	Demand Analysis of Beer Consumption in the U.S.
Principal Investigators	Olga Murova and Benaissa Chidmi
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	December 2014
Ending Date	August 2015
Project Objective	To determine U.S. consumers preferences of domestic vs. imported beer; to name specific socio-demographic factors contributing to the established preference; and to determine consumers' preferences for a set of categories of domestic and foreign beer.
Project Summary and Accomplishments	Results of the first part of this analysis show that majority of U.S. consumers prefer U.S. beer to imported beer. This is especially true for consumers with income between \$20,000 and \$45,000, and for the consumers with extremely low income, up to \$10,000; who are 25 years old or older, have some college or completed college degree, and identifying themselves as laborers. Nested multinomial logit model will allow determination of consumers' preferences for a set of categories of domestic and imported beer by estimating the choice probabilities for a set of alternatives.
Keywords	Demand analysis, logit model, MNL model, consumers' preferences
Important Publications and Presentations	Presented at the American Association of Wine Economists Meeting, Mendoza, Argentina, May 2015.

Project Title	OIA Bangladesh Agricultural Marketing Information System (BAMIS) Implementation and Transition to DAM Server
Principal Investigators	Surya Yadav, Shaikh M. Rahman, and Terri Giddens
Departmental Involvement	Agricultural and Applied Economics, Integrative Systems & Quantative Sciences
Funding Amount	\$53,187
Funding Agency	USDA – Foreign Agricultural Service
Beginning Date	November 2014
Ending Date	February 2015
Project Objective	The objective of this project is implementation and transition of the Bangladesh Agricultural Marketing Information System (BAMIS) to Department of Agricultural Marketing (DAM) server.
Project Summary and Accomplishments	<p>In the first phase of the project, a new database infrastructure for agricultural marketing in Bangladesh has been developed at Texas Tech University. The system is capable of taking daily prices of agricultural commodities traded in different markets in Bangladesh as inputs. Upon verification of the entered prices, the system makes the data available for various users such as general public, policy makers, and researchers. The system is also capable of generating market price reports and graphs demonstrating price trends. Required hardware are also provided for proper functioning of the software. Both hardware and software are delivered to Department of Agricultural Marketing (DAM), Bangladesh.</p> <p>In the second phase of the project, further revisions in BAMIS have been made and the system has been transferred to DAM server. DAM officials have been trained for proper use of the information system, and the system was made ready to launch.</p>
Keywords	Agricultural Marketing Information System, Department of Agricultural Marketing, Bangladesh
Important Publications and Presentations	

Project Title	Conference for Developing a Regional Agricultural Undergraduate Research Consortium
Principal Investigators	Shaikh M. Rahman, Jonathan Ulmer, Samantha Kahl, Jyotsna Sharma, Louis Mills and Sara Trojan
Departmental Involvement	College of Agricultural Science and Natural Resources
Funding Amount	\$29,716
Funding Agency	United States Department of Agriculture
Beginning Date	May 2015
Ending Date	May 2016
Project Objective	The objectives of this program are: 1) Organize a regional conference to open the dialog about undergraduate research in agriculture. 2) Develop a working consortium between two and four year institutions around undergraduate research in agriculture, and 3) Design a research focus to determine the impact of undergraduate research on the graduates of colleges and departments of agriculture and natural resources
Project Summary and Accomplishments	The program introduced in this proposal will create a successful model of faculty training for undergraduate research specifically in agriculture, natural resources, and climate change. As stated above, our educational need area is: Increasing Faculty Teaching Competencies: <i>Creating a model to train faculty and design course content within the College of Agricultural Sciences and Natural Resources to integrate scientific climate change research experiences in undergraduate students' postsecondary experiences.</i> Beyond TTU, the creation of online resources and the dissemination through our professional organizations will improve the mentoring of undergraduate research by agriculture and natural resources faculty throughout the United States.
Keywords	Undergraduate research, faculty training, agriculture, natural resources, climate change
Important Publications and Presentations	

Project Title	Cotton Inventory Policy of China, Cotton Price Volatility, and Risk Minimizing Hedging Strategies
Principal Investigators	Shaikh M. Rahman and Darren Hudson
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$50,257 (requested)
Funding Agency	Cotton Inc.
Beginning Date	April 2015 (if accepted)
Ending Date	To be determined
Project Objective	The objective of this project is to empirically examine whether and in what extent cotton inventory policy of China influences cotton futures price volatility, and identify optimal hedging strategies for cotton price risk management.
Project Summary and Accomplishments	A preliminary research empirically examines the determinants of cotton futures prices variability, with a special focus on the cotton inventory policy of China. Maximum likelihood techniques are used to estimate the ARCH and GARCH models for price variability. Estimation results show that variability of cotton futures prices significantly increases with the ratio of world stocks to use. In recent years, the world stocks to use ratio of cotton has increased substantially mainly due to China's cotton stockpiling policy. Thus, China's cotton inventory policy adds to cotton futures price risks. The ratio of trading volume to open interests and speculative activity in the cotton futures market are not found to be significant in determining futures price variability. These findings are presented in 2014 Beltwide Cotton Conferences. The paper is published in the proceedings of the conference.
Keywords	Cotton inventory policy of China, cotton price volatility, hedging
Important Publications and Presentations	Rahman, S. M., and B. F. Khan. "Cotton Futures Price Variability: The Role of China's Cotton Inventory Policy." Proceedings, 2014 Beltwide Cotton Conferences, http://www.cotton.org/beltwide/proceedings/2005-2014/index.htm

Project Title	Incidence and Extent of the Clean Development Mechanism across Developing Countries
Principal Investigators	Shaikh M. Rahman, Ariel Dinar, and Don Larson
Departmental Involvement	Agricultural and Applied Economics, University of California-Riverside, and World Bank
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	Not specified
Ending Date	Not specified
Project Objective	The objective of this research is to examine the factors that influence Incidence and extent of the Clean Development Mechanism (CDM) project activities in developing countries.
Project Summary and Accomplishments	Using CDM project and country level data, incidence and extent of CDM adoption across developing and developed countries are analyzed. The main findings are that the incidence and extent of CDM adoption are significantly higher for the developing countries with higher levels of sequestration potential, human capital, emissions, and excess demand for electricity, but lower for the countries with higher levels of transaction costs, vulnerability to climate change impacts, and per capita income. The levels of CDM activities in the Middle Eastern and African countries are substantially lower than those in other regions. The incidence and extent of CDM adoption are higher for the industrialized countries with higher levels of Kyoto inflicted emissions reduction target, domestic mitigation costs, total emissions, and per capita income. For both the developing and industrialized countries, CDM adoption increases over time, initially at an increasing rate but eventually at a decreasing rate as the first commitment period nears the completion, thus demonstrating a logistic pattern. Developing economies that are lagged behind in CDM adoption need to design and implement policies to reduce both direct and indirect costs of initiating and implementing projects. Based on these findings, a journal article is prepared and submitted to <i>Environmental and Development Economics</i> .
Keywords	Clean development mechanism, Kyoto Protocol, incidence, extent
Important Publications and Presentations	Rahman, S. M., Ariel Dinar, and Donald F. Larson. 2015. "Incidence and Extent of the CDM across Developing Countries," <i>Environmental and Development Economics</i> , revised and resubmitted in July 2015.

Project Title	Economic Freedom and Agricultural Productivity – Discovering the Linkages
Principal Investigators	Eduardo Segarra
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2013
Ending Date	August 2016
Project Objective	To evaluate the potential impacts of economic freedom on agricultural productivity. Specifically, to find out if government intervention in agriculture negatively affects agricultural productivity, and the “speed” of technological progress development and adoption in agriculture.
Project Summary and Accomplishments	Initial work regarding the collection of basic data regarding agricultural production, regional economic freedom estimates, government subsidies, and other variables has been completed. Econometric estimation of various regression models are being conducted.
Keywords	Economic freedom, government intervention, agricultural productivity
Important Publications and Presentations	

Project Title	Is Technological Progress/Development in Agriculture Endogenous?
Principal Investigators	Eduardo Segarra
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2013
Ending Date	August 2016
Project Objective	To find out what the core factors influencing technological innovation(s) (technological progress) in agriculture are And what the impacts of length of planning horizon (intra and inter – generational transfer considerations), discount rate, and inherent stochasticity of biotic/abiotic factors are on the dynamics associated with the evolution, development and adoption of advanced production practices/systems in agriculture.
Project Summary and Accomplishments	Work regarding the collection of basic data and the formulation of the simulation/optimization models to be used is in progress.
Keywords	Technological progress, advanced production systems in agriculture
Important Publications and Presentations	

Project Title	Sustainability of Water Resource Use Sustainability in the Hexi Corridor of China
Principal Investigators	Eduardo Segarra
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	No funding for August 2015. For the September 2015 to May 2016 period, total funding of \$36,000 (\$27,000 from the Provost office - TTU, and \$9,000 from departmental sources (\$4,500 from Dr. Phillip Johnson and \$4,500 from Dr. Darren Hudson)
Funding Agency	Provost office, Agricultural and Applied Economics
Beginning Date	August 2015
Ending Date	May 2016
Project Objective	To evaluate the current and future viability of water resource use sustainability for agricultural production in the Hexi corridor of China. This research project will produce a joint research proposal with the School of Arid Environment and Climate Change at Lanzhou University – China which will be submitted for funding to the Chinese National Academy of Sciences
Project Summary and Accomplishments	Work regarding the collection of basic data and the formulation of potential simulation/optimization models to be used in this project is in progress.
Keywords	Water use sustainability, advanced production systems in agriculture
Important Publications and Presentations	

Project Title	Groundwater Use in the Texas High Plains
Principal Investigators	Chenggang Wang
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$13,000 (\$3,200 from September 2014 to August 2015)
Funding Agency	Texas A&M University/Texas AgriLife Research – Lubbock
Beginning Date	January 2013
Ending Date	January 2017
Project Objective	The objective of this project is to study the optimal allocation of irrigation water resources in Texas High Plains. The analysis involves spatial and temporal allocation of water. The spatial allocation of water is concerned with partitioning the field into an irrigated part and a non-irrigated part. The temporal allocation of water is concerned with scheduling the irrigation water over various crop growth stages from planting to harvest. The project will also examine the efficiency of water use at the regional level with an integrated hydro-economic modelling approach.
Project Summary and Accomplishments	The purpose of this project is to study the optimal use of this groundwater resource at the farm and regional level. The farm level analysis examines the optimal way of allocating irrigation water within a field and over the crop growth season. The regional level analysis combines econometric tools with hydrologic models to examine future conditions of the groundwater resource. In the 2014-2015 project year our research effort was focused on the regional analysis. Specifically, we initiated the development of a county-level panel database combining USDA census data with economic, hydrologic, soil, climate data from various public sources. This database will allow for assessment of the changes in the Ogallala aquifer's capacity as a tool for adaptation to climate change. By end of August, 2015, we have accomplished the assembly of USDA census data, USGS hydrologic data, and BEA economic data. Climate and soil data will be incorporated into the database in the next project year.
Keywords	Groundwater, optimization, deficit irrigation

Project Title	Determine the Status of Precision Farming Technology Adoption by Cotton Farmers in 12 States – Texas
Principal Investigators	Chenggang Wang and Eduardo Segarra
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$49,000 (\$7,000 from January 2015 – December 2015)
Funding Agency	Cotton Incorporated
Beginning Date	January 2009
Ending Date	December 2015
Project Objective	Determine the status of precision farming technology adoption by cotton farmers in 12 states (Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, Missouri, North Carolina, South Carolina, Tennessee, Texas, and Virginia).
Project Summary and Accomplishments	In Texas, water is the primary limiting factor for cotton production. We hypothesize that the adoption of precision farming practices is affected by the intrinsic value of water for an irrigator, which depends on the well yield, soil characteristics, and the type of irrigation technology installed. Our econometric testing draws data from a new survey of cotton farmers in Texas. Findings from this analysis will help extension agents and technology developers identify the targeted areas of technology promotion.
Keywords	Precision farming, technology adoption

Project Title	Economically Optimal Irrigation Management with Limited Water Availability
Principal Investigators	Nathan Hendricks, Kansas State University Chenggang Wang, Texas AgiLife Research Ignacio Ciampitti, Kansas State University Dan O'Brien, Kansas State University Jonathan Aguilar, Kansas State University
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2015
Ending Date	August 2017
Project Objective	Our proposed project specifically addresses “Improve the understanding of hydrological and climatic factors that affects water use and economic profitability, and provide estimates of the climatic, hydrologic, cropping, and profitability conditions that are likely to occur on the southern High Plains over the next 50 years.” One of the key hydrologic factors that affects water use and economic profitability is the pumping capacity of the irrigation well. When farmers have a limited pumping capacity, they face difficult decisions to optimally manage the water, especially when they consider uncertain weather (e.g., a drought) and the optimal timing of irrigation. Our project improves the understanding of optimal management under these conditions. This study also examines economically optimal management strategies under limited water—for example, due to policies that restrict water withdrawals.
Project Summary and Accomplishments	Our proposal was rejected for funding support. We are planning to revise and resubmit it next year.
Keywords	Groundwater economics; optimal irrigation management

Project Title	The External Costs of Wind Farm Development on the Great Plains: Are Developers Making an Effort to Minimize These Costs?
Principal Investigators	Ryan Williams
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2011
Ending Date	ongoing
Project Objective	Determine the extent to which wind farm developers have selected development sites which minimize the impact on avian species and human populations.
Project Summary and Accomplishments	The presence of human populations on the great plains neither increases nor decreases the likelihood of wind farm development. Additionally, the presence of human populations is not correlated with the size of wind farm development. The same results hold for sage grouse and prairie chicken habitat. As development relates to habitat for migratory waterfowl, there is an increased likelihood of development in good waterfowl habitat. However, the size of development is decreasing with the presence of such habitat.
Keywords	Wind energy, externalities, land use, avian habitats

Project Title	Virtual Water and Limitedly Renewable Water Resources
Principal Investigators	Ryan Williams, Rashid Al-Hmoud
Departmental Involvement	Agricultural and Applied Economics, Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2008
Ending Date	February 2015
Project Objective	Investigate the concept of virtual water as it relates to the production of agricultural commodities on the Southern High Plains of Texas. The project aims to provide a unique perspective on the virtual water concept due to the limitedly renewable nature of the primary water source for agricultural production in the region.
Project Summary and Accomplishments	We utilize high resolution data over a remarkably homogeneous production region to determine the water resources contained within the various agricultural commodities produced on the Llano Estacado of West Texas. The project demonstrates that the study region is a net exporter of water-intensive commodities, which is inconsistent with being a semi-arid region with a limitedly renewable water resource. Additionally, the project highlights that the measures of virtual water grossly overestimate water usage in this region.
Keywords	Virtual water, Ogallala Aquifer, water footprint
Important Publications and Presentations	Williams, R.B. and R. Al-Hmoud. 2015. "Virtual water on the southern High Plains of Texas: The case of a nonrenewable blue water resource." Natural Resources 6(1): 27-36. http://dx.doi.org/10.4236/nr.2015.61004

Project Title	An Economic Valuation on the External Cost of Milk Packaging and Delivery Options
Principal Investigators	Ryan Williams, Clinton Neill (student), Aaron Benson
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	January 2013
Ending Date	ongoing
Project Objective	Quantify the private and social costs of alternative milk packaging to establish total social costs for comparison.
Project Summary and Accomplishments	Presented the preliminary research at the WAEA Annual Meetings in Monterey, CA in June 2013. Find that glass packaging for fluid milk represents a lower external cost than alternative packaging under return rates and reuse rates that are currently reasonable. However, the glass option only represents a lower total social cost under extreme return and reuse rates. A revision of the manuscript is currently under review.
Keywords	External costs, milk packaging

Project Title	Estimating the Use and Option Value of Water Resources in the Ogallala Aquifer
Principal Investigators	Ryan Williams
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$50,000
Funding Agency	USDA – Agriculture Research Services, Ogallala Aquifer Project
Beginning Date	January 2011
Ending Date	ongoing
Project Objective	Obtain estimates of the use value for water in agricultural, municipal, and industrial uses from the Ogallala aquifer. Additionally, the option value, or “potential use value,” is obtained for comparison.
Project Summary and Accomplishments	Data has been collected and preliminary estimates have been obtained. A survey was conducted to estimate option value and the data is being used by a graduate student in AAEC for her dissertation research, which should be completed Fall 2015. The paper will then be submitted for publication.
Keywords	Groundwater, use value, option value, contingent valuation, willingness-to-pay

Project Title	Estimating the Existence Value of Water Resources in the Ogallala Aquifer
Principal Investigators	Ryan Williams
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$50,000
Funding Agency	USDA – Agricultural Research Services, Ogallala Aquifer Project
Beginning Date	January 2012
Ending Date	ongoing
Project Objective	Obtain estimates of the existence, or non-use, value of the water resources in the Ogallala aquifer.
Project Summary and Accomplishments	Data has been collected and preliminary estimates have been obtained. A survey was developed and administered to a random sample in west Texas. The manuscript is in preparation.
Keywords	Groundwater, existence value, contingent valuation, willingness-to-pay

Project Title	Willingness-to-pay for Playa Restoration
Principal Investigators	Ryan Williams, Aaron Benson
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$50,000
Funding Agency	USDA – Agriculture Research Services, Ogallala Aquifer Project
Beginning Date	March 2014
Ending Date	ongoing
Project Objective	Obtain estimates of household willingness-to-pay to undertake restoration of existing playas across the High Plains. Very few playas currently function properly, and their restoration requires physical alteration and removal of crops from their perimeter. The estimate of WTP helps to determine whether producers would be willing to accept compensation to make these changes.
Project Summary and Accomplishments	Data has been collected. A contingent valuation survey was developed and administered to a random sample in west Texas. Preliminary results were presented at the 2015 Annual Meetings of SAEA. The manuscript is in preparation.
Keywords	Playas, ecosystem services, contingent valuation, willingness-to-pay

Project Title	An Economic Valuation on the External Cost of Alternative Milk Packaging and Delivery Options
Principal Investigators	Ryan Williams, Clinton Neill (student)
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	April 2013
Ending Date	ongoing
Project Objective	Evaluate the environmental impacts, quantified in economic terms, of the existing alternatives for milk packaging. Life cycle analyses were utilized along with current economic estimates of various environmental impacts.
Project Summary and Accomplishments	The results suggest that with current use and reuse rates for glass bottles, that this packaging represents the lowest environmental cost. However, when the private costs of production are also included, it is found that plastic milk packaging represents the lowest cost to society.
Keywords	Milk packaging, externalities, life cycle analysis

Project Title	Consumer Preference for Alternative Milk Packaging
Principal Investigators	Ryan Williams, Clinton Neill (student)
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	April 2013
Ending Date	ongoing
Project Objective	Evaluate the consumer willingness-to-pay for glass bottled milk packaging.
Project Summary and Accomplishments	Literature exists which evaluates consumer preferences for eco-labeled products. This study investigates consumer response to a “perceived” environmental good embodied in the glass bottle. A customer intercept contingent valuation survey was conducted. The results of the study constituted the MS thesis for Mr. Neill.
Keywords	Milk packaging, contingent valuation, willingness-to-pay

Appendix B
RESEARCH FUNDING

2014/15

Research Expenditures (\$), Department of Agricultural and Applied Economics, Texas Tech University

September 1, 2014 through August 31, 2015

	Internal			External										GRAND TOTAL
	Applied Economics	Endowments	Other	TOTAL INTERNAL	State			Federal			Private			
					Outside TTU	CASNR	Other	TOTAL STATE	USDA	Other	TOTAL FEDERAL	PRIVATE	TOTAL PRIVATE	
Carpio	5,761		14,642	20,403			29,997	29,997	84,601		84,601	-	-	135,001
Chidmi				-				-			-	-	-	-
Elam	4,927			4,927							-	-	-	4,927
Farmer	7,442			7,442			3,333	3,333			-	-	-	10,775
Hudson	7,791	87,531	2,217	97,539				-	253,079		253,079	24,900	24,900	375,518
Johnson, P	10,344	76,247	14,656	101,247	54,912			54,912	15,892		15,892	58,306	58,306	230,357
Knight		59,583		59,583			7,000	7,000			-	-	-	66,583
Lange				-			10,688	10,688						10,688
Lyford				-				-	12,746	60,884	73,630		-	73,630
Malaga	2,828		11,151	13,979				-			-	-	-	13,979
Martin				-										-
Murova	8,759		1,358	10,117				-			-	-	-	10,117
Rahman	8,867		6,666	15,533				-			-	-	-	15,533
Segarra	15,857			15,857				-			-	-	-	15,857
Wang	5,700			5,700			5,700	5,700			-	4,634	4,634	16,034
Williams Gen. Operating			11,370	11,370				-	32,153		32,153		-	43,523
	39,511		22,177	61,688				-			-	-	-	61,688
TOTAL	117,787	223,361	84,237	425,385	54,912	-	56,718	111,630	398,471	60,884	459,355	87,840	87,840	1,084,210

* Includes general operating expenses, as well as allocations to Principal Investigators

Appendix C
PUBLICATIONS
2014/15

JOURNAL ARTICLES

Carpio, C.E. and O. Isengildina-Massa. "Does Government Sponsored Advertising Increase Social Welfare? A Theoretical and Empirical Investigation." *Applied Economic Perspectives and Policy* (First published online: May 21, 2015).

Carpio, C. and K. Lange. "Trends in E-Commerce for the Food Marketing System." *CAB Reviews*. 2015, 10, 023:1-8.

Castellon, C., T. Boonsaeng, and C.E. Carpio. "Demand System Estimation in the Absence of Price Data." *Applied Economics*. 47(6)(2015): 553-568.

De-Silva, N., J. Malaga, and J. Johnson, 2013. "Trade Liberalization Effects on Agricultural Production Growth: The Case of Sri Lanka." *Journal of Agricultural Economics and Development*. 3(9): 144-151. (2014).

Ettoumi, Y., A. Maaninou, and B. Chidmi. "Regional Location Determinants of Foreign Direct Investments in Morocco." *Journal of Humanities and Social Science*, Vol. 20, Vol. 3 (2015), 35.42.

Fan, Y., C. Wang, and Z. Nan. "Comparative Evaluation of Crop Water Use Efficiency, Economic Analysis, and Net Household Profit Simulation in Arid Northwest China." *Agricultural Water Management*. 2014. Vol. 146, December 2014, pp. 335-345.

Luitel, K., D. Hudson, and D. Ethridge. "Evaluating Cotton Utilization in Non-Woven Textiles." *Journal of Cotton Science*, 19(2015): 298-306.

Qin, L., C. Chen, X. Liu, C. Wang, and Z. Jian. 2015. "Health Status and Earnings of Migrant Workers from Rural China." *China & World Economy*. Vol. 23, Issue 2, pp. 84-99.

Romero-Padilla, A., M. Hernandez-Juarez, O.A. Arana-Coronado, R.C. Garcia-Sanchez, J. Malaga, and E. Segarra. 2014. Impacto de la Produccion de Biocombustibles en Estados Unidos en el Mercado de Maiz (*Zea mays* L). *Agrociencia*. 48 (6): 653-665, 2014.

Tewari, R., J. Johnson, D. Patterson, D. Hudson, C. Wang. "Global Warming Perception and Willingness to Pay for Environment in High Carbon Emitting Nations." *Asian Journal of Research in Social Sciences and Humanities*. 2014. Vol. 4, No. 9, pp. 287-305.

Zapata, S.D. and C.E. Carpio. "The Theoretical Structure of Producers' Willingness to Pay Estimates." *Agricultural Economics* 45(5) (September 2014): 613-623.

Zivkovic, S. and D. Hudson. "Carbon Sequestration and Carbon Management Policy Effects on Production Agriculture in the Texas High Plains." *Environmental Management and Sustainable Development*, 3, 2014, 44-60.

BOOK CHAPTERS

Mitchell, D., Hudson, D., Post, R., Bell, P., and Williams, R.B. "Food Security and Conflict." *Food Security in an Uncertain World, Volume 15*, A. Schmitz, P.L Kennedy & T.G. Schmitz, eds.

Murova, O. Agricultural Land Policy of Ukraine: State Legislation and Efficiency Analysis. *Transition to Agricultural Market Economies: The Future of Kazakhstan, Russia and Ukraine*. CABI, June, 2015.

TECHNICAL REPORTS

North Plains Groundwater Conservation District. 2015. The Texas High Plains Initiative for Strategic and Innovative Irrigation Management and Conservation. Final report for the USDA-NECS Conservation Innovation Grant Contract #69-3A75-11-184, 134 pgs. May 2015.

Roberts, R.K., B.C. English, J.A. Larson, D.M. Lambert, M. Velandia, C.N. Boyer, M. Buschermohle, X. Zhou, B. Edge, P. Watcharaanantapong, S.L. Larkin, B. Sanewich, A. Mishra, K. Paudel, A.R. Khanal, L.L. Falconer, S.W. Martin, R.M. Rejesus, M.C. Marra, S. Kotsiri, C. Wang, E. Segarra, S. Nair, Y. Wang, and J.M. Reeves. 2015. Economics of Precision Farming Working Group: University of Tennessee, University of Florida, Louisiana State University, and Texas Tech University. 2015 Final Report for Cotton Incorporated.

PROCEEDING PAPERS

Barrowclough, M. K. A. Boys and C.E. Carpio. "An Evaluation of Firm and Contract Characteristics Valued by Supply Chain Partners in Specialty Crop Marketing Channels." Annual Meetings of the Agricultural and Applied Economics Association, San Francisco, California, July 26-28, 2015.

Hudson, D. and B. Liu. "The Potential Impact of Declining Chinese Stocks on the U.S. Cotton Market." Paper presented at Beltwide Cotton Conferences. San Antonio, Texas. 507 January, 2015.

Gillum, M. and P. Johnson. 2015. FieldPrint Calculator: Results from the Texas High Plains. *2015 Beltwide Cotton Conferences Proceedings*. Selected for presentation at the 2015 Beltwide Cotton Conference. Co-sponsored by the National Cotton Council and the Cotton Foundation, January 4-7, 2015, San Antonio, Texas.

Kazuyoshi, I. and J. Malaga. "A Partial Equilibrium Model of the US, Mexico, and Japan Sorghum Markets" 2015 AAEA-WAEA Joint Annual Meeting, San Francisco, California, July 2015.

Kazuyoshi, I. and J. Malaga. "Why has the US Lost Market Share in the Sorghum Japanese Market?" 2015 Meetings Southern Agricultural Economics Association. Atlanta, Georgia, February, 2015.

Luitel, K., D. Hudson, T. Knight, 2015. "Evaluation of Crop Insurance Choices for Cotton Producers in Texas High Plains Under the 2015 Farm Bill by Constructing Representative Cotton Farm." Paper presented at Beltwide Cotton Conferences. San Antonio, Texas. 5-7 January, 2015.

Mitchell, D., D. Hudson, R. Williams, P. Johnson, and K. Hayhoe. "Impact of Climate Change on Cotton Production in Uzbekistan." Paper presented at Beltwide Cotton Conferences. San Antonio, Texas. 5-7 January, 2015.

Nair, S., C. Wang, E. Segarra, J. Johnson, and R. Rejesus. 2015. Impact of Variable Rate Technology Adoption on Cotton Yield in Texas. Proceedings of the 2015 Beltwide Cotton Conferences., Cotton Economics and Marketing Conference Section, CD-ROM. Selected for presentation at the 2015 Beltwide Cotton Conferences. Co-sponsored by the National Cotton Council and Cotton Foundation, January 5-8, San Antonio, Texas.

Rahman, S.M., and G.A. Kirkman, 2015. "Costs of Certified Emission Reduction Under the Clean Development Mechanism of the Kyoto Protocol." *Energy Economics*. 47: 129-141.

Rahman, S.M., D.F. Larson, and A. Dinar, 2015. "Costs of Greenhouse Gas Emissions Abatement Under the Clean Development Mechanism of the Kyoto Protocol." *Climate Change Economics*. 6(1), 15550005: 1-34.

Sandoval, L., J.E. Malaga, and C.E. Carpio. "Analysis of the Impact of Dollarization and CAFTA-DR on El Salvador's Trade Flows." Annual Meetings of the Southern Agricultural Economics Association, Atlanta, Georgia, January 31-February 3, 2015.

Sapkota, P., T.A. Wheeler, J.P. Bordovsky, S. Maas, and C. Carpio. "The Costs and Benefits of Irrigation and Crop Rotation for Cotton Grown in a Verticillium Wilt Field in the Southern High Plains of Texas." Proceedings of the 2015 Beltwide Cotton Conferences, San Antonio, Texas, January 5-8, 2015.

Wang, H. and J. Malaga. "Assessing China's Potential Surge on Grain Sorghum Demand." 2015 Meetings Southern Agricultural Economics Association. Atlanta, Georgia, February, 2015.

Williams, R.B., R. Al-Hmoud. 2015. "Virtual Water on the Southern High Plains of Texas: The Case of A Non-Renewable Blue Water Resource." *Natural Resources*. 6(1): 27-36.

Williams, R.B., and D.M. Mitchell. 2015. (Book Review) – "Water management and climate change: dealing with uncertainties, edited by Cecilia Tortahada, Asit K. Biswas, and Avinash Tyagi, New York, Routledge Books, 2015, 176 pp., US\$150.00 (hardback), ISBN: 978-1-13-880916-1." *Journal of Natural Resources Policy Research*. DOI: 10.1080/19390459.2015.1075738.

ABSTRACTS

Luitel, K., D. Hudson, T. Knight, 2015. "Understanding Cotton Producer's Crop Insurance Choices Under the 2014 Farm Bill." Paper presented at AAEE & WAEA Joint Annual Meeting. San Francisco, California. 26-28 July, 2015.

Luitel, K., T. Knight, and D. Hudson, 2015. "Evaluation of Crop Insurance Choices for Cotton Producers Under the 2015 Farm Bill." Paper presented at Southern Agricultural Economics Association Annual Meeting. Atlanta, GA. Jan 31-Feb 3, 2015.

Williams, R., D. Mitchell, C. Neill and A. Benson, 2015. "Household Willingness to Pay for Playa Restoration." Paper presented at Southern Agricultural Economics Association Annual Meeting. Atlanta, GA. Jan 31-Feb 3, 2015.

Zivkovic, S. and D. Hudson. "Impact of the Relationship Between Managers and the Board of Directors on Financial Performance of Agricultural Cooperatives." Paper presented at Southern Agricultural Economics Association Annual Meeting. Atlanta, GA. Jan 31-Feb 3, 2015.

OTHER PUBLICATIONS

Sosebee, R., C. Villalobos, P. Johnson and D. Mitchell. Timeliness of Restocking Southwestern Rangelands After a Major Drought. *Rangeland Issues*, Vol. 4 No. 1, 2015.

Appendix D

PRESENTATIONS THAT WERE NOT
PUBLISHED IN ANY OUTLET

2014/15

Boonsaeng, T., and C.E. Carpio. "Data Collection and Food Demand System Estimation Using Cross Sectional Data." Selected Poster at the annual meetings of the Annual Meetings of the American Agricultural and Applied Economics Association, San Francisco, CA, July 2015.

Carpio, C.E., L.G. Matthews, T. Boonsaeng, A. Perrett, and K. Descieux. "Evaluating the Marketing Impact of a Regional Branding Program Using Contingent Valuation Methods: The Case of the Appalachian Grown™ Branding Program." Selected poster at the annual meetings of the Annual Meetings of the American Agricultural and Applied Economics Association, San Francisco, CA, July 2015.

Garcia, M. and C.E. Carpio. "Analysis of Food Security in Guatemala." Selected Poster presented at the *Texas Tech University* Undergraduate Research Conference, Lubbock, TX, March 31-April 2, 2015.

Hudson, D. "China's Policy Driven Ascendency in Cotton." Presentation to the Osher Lifelong Learning Institute, Lubbock, Texas, February 9, 2015.

Hudson, D. "Foreign Agricultural Subsidies." Testimony to the United States House of Representatives Committee on Agriculture, June 3, 2015.

Hudson, D. "Nervous in the Country: The Impacts of the Farm Bill and Economic Climate on Texas Agriculture." Presentation to the Huffaker Agricultural Seminar, Texas Tech University Law School, April, 29, 2015.

Hudson, D. "New Options and Choices Under the 2014 Farm Bill." Presentation to agricultural producers, Abernathy, Texas, January 29, 2015.

Hudson, D. "New Options and Choices Under the 2014 Farm Bill." Presentation to agricultural producers, Altus, Oklahoma, December 8, 2014.

Hudson, D. "New Options and Choices Under the 2014 Farm Bill." Presentation to agricultural producers, Anton, Texas, October 6, 2014.

Hudson D. "New Options and Choices Under the 2014 Farm Bill." Presentation to agricultural producers, Bovina, Texas, September 10, 2014.

Hudson, D. "New Options and Choices Under the 2014 Farm Bill." Presentation to agricultural producers, Brownfield, Texas, September 11, 2014.

Hudson, D. "New Options and Choices Under the 2014 Farm Bill." Presentation to the 2014 Annual Bankers Agricultural Credit Conference, Lubbock, Texas, November 14, 2014.

Hudson, D. "New Options and Choices Under the 2014 Farm Bill." Presentation to the Women's Profession Accountant Association of West Texas, Lubbock, Texas, June 18, 2015.

Hudson, D. "The Crop Insurance Provisions of the Farm Bill and Optimal Farm Choices." Presentation to the Red River Crops Conference, Childress, Texas, January 28, 2015.

Hudson, D. "The Farm Bill One Year In..." Presentation to the Plains Cotton Ginners Annual Meeting, Lubbock, Texas, August 31, 2015.

Hudson, D. "The Potential Impact of Farm Bill Changes on Feed Prices and Livestock." Hi-Pro Feeds Annual Sales Meeting, November 20, 2014.

Hudson, D. "The Short and Long-Term Outlook for Cotton." Presentation to the Texas Cotton Association Annual Meeting, San Antonio, Texas, April 24, 2015.

Hudson D., and B. Liu. "Preliminary Global Cotton Baseline: 2015-2023." FAPRI Baseline Meeting, Washington, DC, December 16, 2014.

Hudson, D. and B. Liu. "The Potential Impact of Declining Chinese Stocks on the U.S. Cotton Market." Presentation to the 2014 Annual Texas Cotton Association Flow Meeting, Lubbock, Texas, September 12, 2014.

Martin, A. and D'Amico, D.J.. "Punishment, Proportionality, and Knowledge Problems." Working paper presented at Southern Economic Association Meetings. New Orleans, Louisiana, November 2014.

Martin, A. and M. Petersen. "Poverty Alleviation as an Economic Problem." Working paper presented at Association of Private Enterprise Education Meetings in Cancun, Mexico, April 2015.

Martin, A. and M. Petersen. "Poverty Alleviation as an Economic Problem." Working paper presented at Public Choice Society Meetings. San Antonio, Texas, March 2015.

March R., C. Lyford, and B. Powell. "Causes and Barriers to Increases in Economic Freedom." Selected for Presentation 2015 Association of Private Enterprise Education Conference. Cancun, Mexico, April 12-14, 2015.

March, R., C. Lyford, and B. Powell. "Causes and Barriers to Increases in Economic Freedom." Presented at the Free Market Institute. Lubbock, Texas, 31 October 2015.

Mitchell, D., Hudson, D., Williams, R., and Johnson, P. "Impact of Climate Change on Food Security in Uzbekistan." *2015 Southern Agricultural and Applied Economics Annual Meeting, Organized Symposium: Food Security in an Imperfect World: Economic Perspectives on Causes and Remedies.*

Mitchell, D., Hudson, D., Williams, R., and Johnson, P., and Hayhoe, K. "Food Security and Water Availability in Uzbekistan." 2015 Conference for the Society of Industrial and Applied Mathematics (SIAM), Invited Paper.

Murova, O. "Efficiency of the U.S. Public Sector." Presented at Southern Association of Agricultural Economists Meeting. Peer-reviewed. February 3, 2015.

Murova, O. and B. Chidmi. "Demand Analysis of Beef Consumption in the U.S." American Association of Wine Economics, Mendoza, Argentina, International, peer-reviewed. May, 2015.

Nair, S., C. Wang, E. Segarra, Johnson, and R. Rejesus. 2015. "Impact of Variable Rate Technology Adoption on Cotton Yield in Texas." Presentation at the 2015 Beltwide Cotton Conference. San Antonio, Texas, January 5-8, 2015.

- Rahman, S.M. and A. Dinar. 2015. “The Value of Certified Emission Reductions: Determining Optimal Weight for Mitigation Balance Across Sectors and Regions.” Working Paper.
- Rahman, S.M.. “Incidence and Extent of Clean Development Mechanism Across Developing Countries.” 2014 Conference of the Association for Economic and Development Studies on Bangladesh (AEDSB), Dhaka, Bangladesh, December 22, 2014.
- Rahman, S.M.. 2015. “Optimal Contracting for Cattle Feeding: An Assessment of Climatic Conditions.” For *Applied Economics Perspectives and Policy*.
- Rahman, S.M. and R. Just. 2015. “Optimal Contracting for Cattle Feeding: A Multitask Principle-Agent Model.” For the *American Journal of Agricultural Economics*.
- Rahman, S.M., R.S. Fletcher, E. Haites, and G.A. Kirkman, 2014. “Costs of Electricity Generation by Power Projects Under the Clean Development Mechanism.” Submitted to *Energy Economics* in September 2014.
- Rahman, S.M., D.F. Larson, and A. Dinar, 2015. “Incidence and Extent of Clean Development Mechanism Across Developing Countries.” Revised and resubmitted to *Environment and Development Economics* in July 2015.
- Segarra, E.. 2015. “Precision Agriculture the Role of Science.” Invited address at the School of Arid Environment and Climate Change, Lanzhou University, July 8, Lanzhou, China.
- Segarra, E.. 2015. “Profit Maximization Revisited: Considering the Role of Hedonic Pricing.” Invited address at the School of Arid Environment and Climate Change, Lanzhou University, July 8, Lanzhou, China.
- Segarra, E.. 2015. “Relevancy of the Agricultural Sector in the Texas High Plains.” Invited address at the School of Arid Environment and Climate Change, Lanzhou University, July 7, Lanzhou, China.
- Segarra, E.. 2015. “Social Welfare and Environmental Degradation Tradeoffs in Agriculture: The Case of Ecuador.” Invited address at the School of Arid Environment and Climate Change, Lanzhou University, July 7, Lanzhou, China.
- Segarra, E.. 2015. “The Relevancy of Applied Agricultural Economics Research.” Invited address at the School of Arid Environment and Climate Change, Lanzhou University, July 7, Lanzhou, China.
- Segarra, E.. 2015. “Welfare Economics: Consideration of Externalities in the Agricultural Production Process.” Invited address at the School of Arid Environment and Climate Change, Lanzhou University, July 7, Lanzhou, China.
- Wang, C. 2015. “Natural Resource Policy.” Invited lectures at the College of Pastoral Agriculture Science and Technology, Lanzhou, University, China, June 2015.

Williams, R.B., (Presented by De Silva, N.) “Assessing the Option Value of the Groundwater of the Ogallala Aquifer in Texas High Plains: A Contingent Valuation Approach.” Selected presentation at the Southern Agricultural Economics Association Annual Meeting, Atlanta, Georgia, February 2015.

Williams, R.B.. (Presented by Neill, C.) “Consumer preference for alternative milk packaging.” Selected presentation at the Southern Agricultural Economics Association Annual Meeting, Atlanta, Georgia, February 2015.

Williams, R.B.. “Household Willingness to Pay for Playa Restoration.” Selected presentation at the Southern Agricultural Economics Association Annual Meeting. Atlanta, Georgia, February 2015.

Williams, R.B. (Presented by Mitchell, D.) “Impact of Climate Change on Cotton Production in Uzbekistan.” Selected presentation at Beltwide Cotton Conferences, San Antonio, Texas, January 2015.

Williams, R.B., Organized Symposium: Food Security in an Imperfect World: Economic Perspectives on Causes and Remedies. (Presented by Mitchell, D.) “Climate Change and Food Security in Central Asia.” Southern Agricultural Economics Association Annual Meeting, Atlanta, Georgia, February 2015.

Zivkovic, S. and D. Hudson. “Impact of the Relationship Between Managers and the Board of Directors on Financial Performance of Agricultural Cooperatives.” Paper presented to the 2015 Texas Agricultural Cooperative Council Board Chairman’s Conference, Ruidoso, New Mexico, July 3, 2015.

Zivkovic, S. and D. Hudson. “Impact of the Relationship Between Managers and the Board of Directors on Financial Performance of Agricultural Cooperatives.” Paper presented to the 2015 Texas Agricultural Cooperative Council Managers Conference, Ruidoso, New Mexico, July 9, 2015.

Appendix E

AAEC RESEARCH ADVISORY COMMITTEE

**Research Advisory Committee
2014 – 2015
Addresses and Phone Numbers**

Mr. Tommy Engleke
Texas Agricultural Cooperative Council
1210 San Antonio, Suite 101
Austin, TX 78701-1834
(512) 450-0555
tommy@texas.coop
(Term expires 2016/17)

Mr. Marc Adams
CoBank
P.O. Box 6770
Lubbock, TX 794936
(806) 788-3702
adamsma@cobank.com
(Term expires 2015/16)

Dr. Jaroy Moore
Rt. 3, Box 219
Lubbock, TX 79403
(806) 746-6101
j-moore@tamu.edu
(Term expires 2014/15)

Dr. John Robinson
Texas A&M AgriLife Extension
2124 TAMU
College Station, TX 77843-2124
jrcr@tamu.edu
(Term expires 2013/14)

Jason Coleman
High Plains Water District
2930 Ave. Q
(806) 762-0181
jason.coleman@hpwd.com
(Term expires 2016/17)

Mr. Clint Cryer
Plains Capital Bank
P.O. Box 271
Lubbock, TX 79413
(806) 791-6883
clint.cryer@plainscapital.com
(Term expires 2016/17)

Ms. Shelly Nutt
Texas Peanut Producers Board
4205 N. I 27
Lubbock, TX 79403
(806) 687-6363
shelly@texaspeanutboard.com
(Term expires 2015/16)

Mr. Bart Roye
BETA Ag
P.O. Box 1187
Ralls, TX 79357
(806) 253-2514
(Term expires 2014/15)

Mr. Buzz Cooper
Texas Star Cooperative Gin
4421 East FM 41
Slaton, TX 79364
(806) 828-3083
Texas.star.coop2@pcca.com
(Term expires 2016/17)

Mr. Charley Tripett
PCCA
Lubbock, TX 79404
(806) 763-8011
Charley.triplett@pcca.com
(Term expires 2014/15)

**Research Advisory Committee
2015 – 2016
Addresses and Phone Numbers**

Mr. Tommy Engleke
Texas Agricultural Cooperative Council
1210 San Antonio, Suite 101
Austin, TX 78701-1834
(512) 450-0555
tommy@texas.coop
(Term expires 2016/17)

Mr. Marc Adams
CoBank
P.O. Box 6770
Lubbock, TX 794936
(806) 788-3702
adamsma@cobank.com
(Term expires 2015/16)

Dr. Jaroy Moore
Rt. 3, Box 219
Lubbock, TX 79403
(806) 746-6101
j-moore@tamu.edu
(Term expires 2017/18)

Dr. John Robinson
Texas A&M AgriLife Extension
2124 TAMU
College Station, TX 77843-2124
jrcr@tamu.edu
(Term expires 2017/18)

Jason Coleman
High Plains Water District
2930 Ave. Q
(806) 762-0181
jason.coleman@hpwd.com
(Term expires 2016/17)

Mr. Clint Cryer
Plains Capital Bank
P.O. Box 271
Lubbock, TX 79413
(806) 791-6883
clint.cryer@plainscapital.com
(Term expires 2016/17)

Ms. Shelly Nutt
Texas Peanut Producers Board
4205 N. I 27
Lubbock, TX 79403
(806) 687-6363
shelly@texaspeanutboard.com
(Term expires 2015/16)

Dr. Justin Weinheimer
Sorghum Checkoff
4201 N. Interstate 27
Lubbock, TX 79403
(806) 749-9002
(Term expires 2017/18)

Mr. Buzz Cooper
Texas Star Cooperative Gin
4421 East FM 41
Slaton, TX 79364
(806) 828-3083
Texas.star.coop2@pcca.com
(Term expires 2016/17)

Mr. Charley Triplet
PCCA
Lubbock, TX 79404
(806) 763-8011
Charley.triplett@pcca.com
(Term expires 2014/15)

Appendix F

THORNTON INSTITUTE ACTIVITIES

2014/15

FORTY-SECOND ANNUAL
BANKERS AGRICULTURAL CREDIT CONFERENCE
INTERNATIONAL CULTURAL CENTER
TEXAS TECH UNIVERSITY
LUBBOCK, TEXAS

NOVEMBER 14, 2014

- 7:30 - 8:30 a.m. **Registration**
- 8:00 - 8:05 **General Session**
Presiding: Mr. Kent Jackson
 President
 Bankers Agricultural Credit Conference
- 8:05 - 9:00 **Legal and Regulatory Update**
Mr. John Heasley
General Counsel
Texas Bankers Association
Austin
- 9:00 - 10:00 **Choices in the Farm Bill –Effect on Producers and Bankers**
Dr. Darren Hudson
Combest Chair of Agricultural Competitiveness
Director of the International Center for Agricultural Competitiveness
Department of Agricultural and Applied Economics
Texas Tech University
Lubbock
- 10:00 - 10:30 **Break**
- 10:30 - 11:00 **Agricultural Outlook for Cattle 2015**
Mr. Jason Slane
Market & Membership Manager
Texas Cattle Feeders Association
Amarillo
- 11:00 - 11:30 **Agricultural Outlook for Cotton 2015**
Dr. John Robinson
Professor and Extension Economist
Texas A&M AgriLife Extension
Texas A&M University
College Station

11:30 **Lunch**

Hall of Nations

Luncheon Speaker:
Mr. Robert Duncan
Chancellor
Texas Tech University System

Presentation of the 2014 Distinguished Banking Service Award

1:30 - 2:30

Economic Outlook

Dr. Steven Kiser
Regional Economist
Federal Deposit Insurance Corporation
Dallas

2:30 - 3:00

Agricultural Outlook for Grains 2015

Dr. Mark Welch
Assistant Professor and Extension Economist
Texas A & M AgriLife Extension
College Station

3:00

Adjourn

BANKERS AGRICULTURAL CREDIT CONFERENCE
OFFICERS AND DIRECTORS
2014

President:

Mr. Kent Jackson
Senior Vice President
First United Bank
Amarillo

Directors:

Mr. Chad Currington
Senior Vice President
City Bank
Lubbock

Mr. Michael Bain
Exec. Vice President
First United Bank
Canyon

Mr. Chuck Senter
Area President
First Bank and Trust
Tahoka

Mr. Clint Cryer
Vice President
PlainsCapital Bank
Lubbock

Coordinator:

Dr. Phillip Johnson
Chairman, Department of Agricultural and Applied Economics
Charles C. Thompson Endowed Chair of Agricultural Finance
Director, Thornton Agricultural Finance Institute
Texas Tech University

Sponsored By:

Texas Bankers Association
Independent Bankers Association of Texas
Thornton Agricultural Finance Institute
United Sorghum Checkoff Program
Agri-Access