

ANNUAL REPORT
RESEARCH PROGRAM
2015/16

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

November 2016

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General Summary

This report presents research and related outreach activities of the Department of Agricultural and Applied Economics – Texas Tech University during fiscal year 2015/2016. The research program of the Department of Agricultural and Applied Economics addresses various issues of economic significance with a strong applied focus, although there are strong disciplinary elements with 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 2015/16, there were 58 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 2015/16 totaled \$1,344,018 (Table 1). Research support from the four endowments in the department - Larry Combest Agricultural Competitiveness Endowed Chair, Emabeth Thompson Professorship in Agricultural Risk Management, Charles C. Thompson Chair in Agricultural Finance, and Thornton Agricultural Finance Institute – provided about 20% of annual research expenditures. Details regarding the funding of specific research projects are provided in Appendix A. Of the \$1.344 million in research expenditures in FY2015/16, 45% was from state sources, 51% from federal sources and 4% from private sources. As shown in Figures 1 and 2, total research expenditures have been declining in recent years, primarily from reduced federal funding; however, in 2015/16 research expenditures increased as federal funding increased.

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. Graduate enrollment has increased the past few years as the MAB and the Ph.D. programs have grown. A total of 23 graduate degrees were awarded in FY2015/16, 6 Ph.D., 7 M.S. and 10 MAB. Graduate enrollment in fall 2016 was 62 - 30 Ph.D., 21 M.S., and 11 MAB. The growth in the Ph.D. program has been significantly aided by funding from the Free Market Institute at Texas Tech and the Borlaug Higher Education for Agricultural Development (BHEARD) program through USAID.

A summary of publications and presentations regarding research is provided in Table 3. The department has been very productive over the past several years in journal publications, abstracts, proceeding papers and technical reports. During FY 2015/16, publication output increased from the previous year which is a function of the increase of graduate enrollment experienced the past few years. Appendices C and D contain a comprehensive list of all FY 2015/16 publications and presentation, respectively.

The International Center for Agricultural Competitiveness under the directorship of Dr. Darren Hudson has continued to provide valuable research, analysis and educational input to national agricultural policy. Dr. Hudson has made numerous presentations and interviews regarding the cotton markets, agricultural and trade policy, and other issues related to agricultural competitiveness.

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 CERI 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 impacts of biofuel policy on U.S. household edible oil consumption.
2. Other on-going research is related macroeconomic impacts on agriculture, foreign agricultural subsidies, and crop insurance.
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 2015/16, 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
- Provided support in part or whole for 11 graduate students and salary support for 6 faculty.

Proceedings

- Gillum, M. and **P. Johnson**. 2016. Fieldprint Calculator: The Effects of Irrigation and Tillage Practices on Sustainability in the Texas High Plains. *2016 Beltwide Cotton Conferences Proceedings*, pg. 812-817. Selected for presentation at the 2015 Beltwide Cotton Conference. Co-sponsored by the National Cotton Council and the Cotton Foundation, January 5-7, 2016, New Orleans, LA.

Technical Reports

- Gillum, M.*, **P. Johnson**, D. Hudson and R. Williams. 2016. "Fieldprint Calculator a tool to evaluate the effects of management on physical sustainability." *Crops & Soil Magazine*, Vol. 49 No. 1, p 26-29, February 5, 2016.
- Kellison, R., *et al.* 2015. An Integrated Approach to Water Conservation for Agriculture in the Texas Southern High Plains. Texas Alliance for Water Conservation 10th Annual Report submitted to the Texas Water Development Board, under project number 141G-44-B819, 280 pgs., College of Agricultural Sciences and Natural Resources, Texas Tech University. December 2015.

- Sosebee, R., C. Villalobos, **P. Johnson**, and D. Mitchell. 2015. “Timeliness of Restocking Southwestern Rangelands after a Drought.” Rangelands Issues, Vol 4 (1).

Presentations

- **Johnson, P.** 2016. “Is Winter Coming?” Presentation at the 2016 Lubbock Shareholders Meeting for the FHL Bank of Dallas. June 14, 2016, Lubbock, TX.

Service

The Institute co-sponsored the 43rd Annual Bankers Agricultural Credit Conference in November, 2015, 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.

Agricultural Risk Management

The Agricultural Risk Management was inactive for this fiscal year due to the retirement of Dr. Tom Knight, and the hiring of Dr. Stephen Devadoss.

**Table 1. Department of Agricultural and Applied Economics
Research Expenditures by Source, 1981/82 to 2015/16**

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
2015/16	608,474	682,622	52,922	1,344,018

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

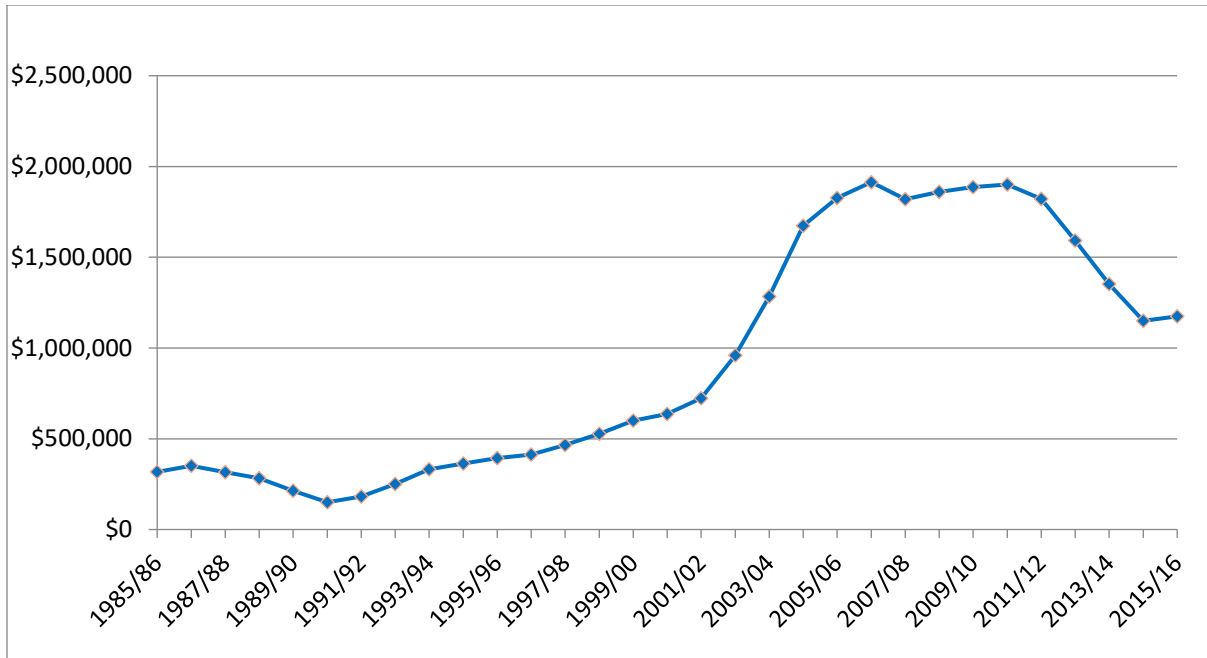


Figure 1. Three-Year Moving Average of Total Research Expenditures.

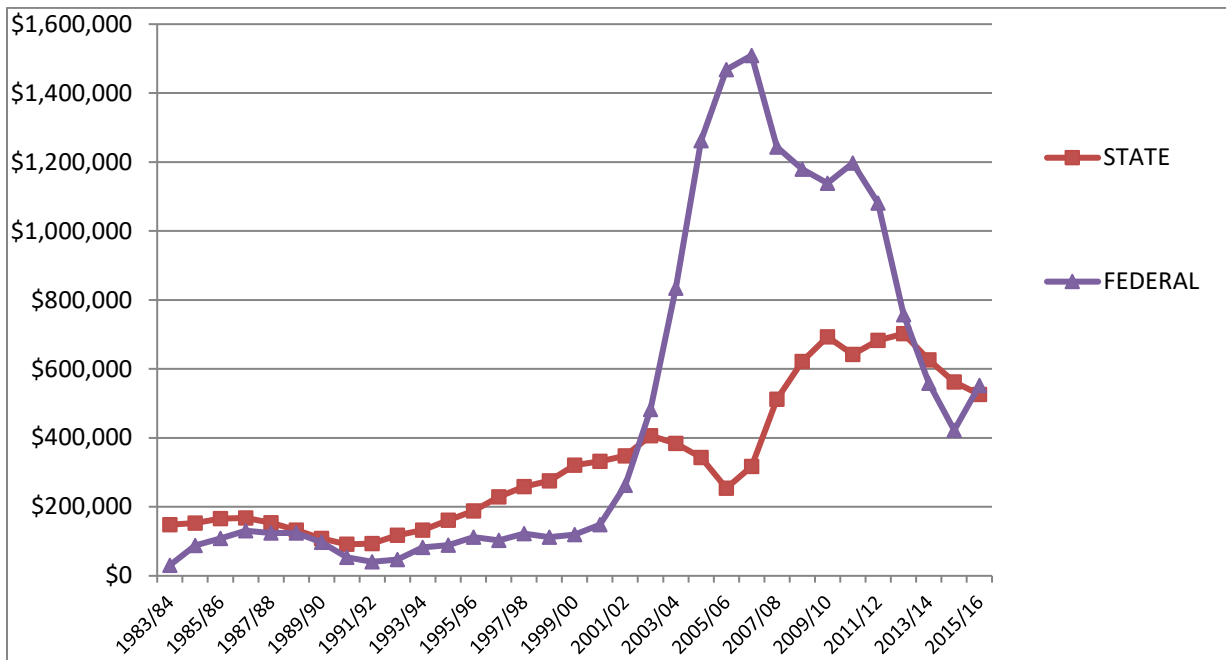


Figure 2. Three-Year Moving Average of State and Federal Research Expenditures.

Table 2. Graduate Degrees Awarded, Department of Agricultural and Applied Economics, 1982/83 to 2015/16

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
2015/16	10	0	7	6

Table 3. Department of Agricultural and Applied Economics Publications and Presentations, 1979/80 to 2015/16

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
2015/16	39	2	6	20	3	62

Recent Significant Research Findings/Impact Statements

In the study “The Supplemental Nutrition Assistance Program (SNAP) and Household Spending: A Flexible Demand System Approach,” whose main objective is to evaluate the effect of SNAP on households’ expenditures on non-durable goods (food, utilities, apparel, transportation, medical care, and other nonfood spending), we did not find evidence of differences in the marginal propensities to spend values out of cash income and SNAP benefits. Thus, we do not find evidence that households’ income from SNAP benefits is treated any different than income from cash sources.

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.
- 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 due to the different collection periods.
- Large biases are still present even when using econometric methods currently recommended to account for measurement data problems, especially the infrequency of purchases problem.

The study “Economic Analysis of Alternative Livestock Production Systems in Honduras” evaluated the profitability and production efficiency of three finishing beef production systems: 1) A grazing production system supplemented with concentrate and silage; 2) A confined beef production systems with a palm kernel meal based diet; and 3) A confined beef production sugar cane - meal based diet. The main study findings are:

- In an annual basis, the confined system with cattle fed with a palm kernel meal based diet was found to generate the highest level of profits. This system also had the highest average daily weigh gains; and it therefore allows a higher number of production cycles per year.
- In an annual basis, the grazing system had the lowest level of profitability, even though it had the lowest costs of production and highest profitability levels in a per animal basis, mainly due to the fact that it had the lowest average daily weight gains of the three systems and the largest production period.

The study “Drilling for Innovation: Economic Diversification through the Determination, Distinction, and Development of Renewable Entrepreneurship Clusters” has shown the following:

- All public policy variables (i.e., business environment policy maturity, innovation policy maturity, new venture creation policy maturity) have a direct influence on renewable entrepreneurship cluster growth.
- The economic inductance, defined as the resistance to the conservation of economic energy, has a direct influence on renewable entrepreneurship cluster growth.
- The public policy variables have a significant influence on pace and stability variables (i.e., competition intensity and knowledge spillover effectiveness)

- The economic inductance partially moderates the relationships among public policy variables, peace and stability variables, and renewable entrepreneurship cluster growth.
- Although no significant effect was found for peace and stability variables on renewable entrepreneurship cluster growth, this relationship was partially supported after taking into account the moderating impact of economic inductance.

The study “Demand for Gasoline in US: An Asymmetric Spatial Analysis” has shown the following:

- There is an imperfect reversibility of gasoline demand to change in the price of gasoline.
- The response of gasoline consumption to a price recovery (when price keeps going up, but it is not able to catch the previous maximum historical price) is more aggressive than a response to a maximum price.
- There is strong evidence of spatial autocorrelation between
- Different observations and ignoring this spatial autocorrelation will produce results that are less efficient than when the model controls for this issue.
- There are regional differences in the gasoline market consumption and significant variability in gasoline use trends across regions with respect to different type of prices, income, and population density.

Dr. Adam Martin won First Prize in the F.A. Hayek Essay Contest for scholars under 35, Mont Pelerin Society.

Dr. Adam Martin was a Visiting Scholar at Brown University Political Theory Project in May 2016.

Recent research shows that grain yields in China likely will decline as farm size grows, compromising the government’s food self-sufficiency targets.

Over the period of 2001-2014, the average annual increase in student loan debt for graduates of colleges of veterinary medicine in the U.S. was 5.1%. Over the same period, the average annual cost increase of a 4-year veterinary degree in the U.S. was 4.7%. The majority of the remaining increase can best be explained by the increasing share of women pursuing the DVM.

Glass-bottle packaging of fluid milk has a lower environmental impact as compared to alternative types of packaging only under return rates greater than 95% at the current industry reuse rate of 8 per bottle.

Appendix A

PROJECTS

2015/16

Project Title	The Interaction between the Supplemental Nutrition Assistance Program and Private Charities to Enhance Food Security in Low Income Families
Principal Investigators	Tullaya Boonsaeng, Carlos Carpio, Conrad Lyford – Texas Tech Janani Thapa – University of Georgia
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	N/A
Ending Date	N/A
Project Objective	The proposed research project would use FoodAPS data to develop information that would improve our knowledge of the interaction between the SNAP and food charities in improving food security in low income families.
Project Summary and Accomplishments	The FoodAPS data set provides a much needed opportunity to understand food charities' role and consider ways to develop strategies for enhanced food security from private food charities. The FoodAPS data set has detailed information and prices paid for food acquired over a one week period. Most significantly, for the first time data includes information and data on food acquired through consumer purchases, SNAP benefits and food charities. As such, the data allows analysis at a level not possible with other data sources.
Keywords	Food charities, Supplemental Nutrition Assistance Program, FoodAPS data

Project Title	Data Sources and Food Demand Estimation: A Comparison of Homescan and Consumer Expenditure Survey Data
Principal Investigators	Carlos Carpio Tullaya Boonsaeng
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	Total funding \$40,389 (Expenditures 9/1/15-8/31/16 = \$16,718.82)
Funding Agency	USDA – Agriculture and Food Research Initiative Foundational Program
Beginning Date	August 2013
Ending Date	February 2016
Project Objective	This project aimed 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> <p>We have completed all the analyses to answer the research questions: For question 1): Are there any differences between demand model estimates obtained using Homescan data and BLS data (CEX and CPI data)?</p> <ul style="list-style-type: none"> - 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 19% average difference in the case of expenditure elasticities. <p>For question 2): What are the sources of the differences?</p> <ul style="list-style-type: none"> - 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 due to the different collection periods.

- The largest source of the differences between elasticities estimated using CEX and Homescan data is due to the price index used for estimation.

For question 3) Are there procedures currently available that can help to eliminate/reduce measurement error induced biases?

- Overall, we find that large biases are still present even when using econometric methods currently recommended to account for measurement data problems, especially the infrequency of purchases problem.

Keywords

ACNielsen Homescan, food demand elasticities

Project Title	The Supplemental Nutrition Assistance Program and Household Spending: A Flexible Demand System Approach
Principal Investigators	Carlos Carpio, Tullaya Boonsaeng – Texas Tech University Chen Zhen – University of Georgia Abigail Okrent – USDA-ERS
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	Total funding \$53,602 (Expenditures 9/1/15-8/31/16 = \$7063.35)
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	<p>The main objective of this study is to evaluate the effect of SNAP on households' expenditures on food and nonfood expenditures. We consider six subgroups of non-durable goods: food, utilities, apparel, transportation, medical care, and other nonfood spending. Endogeneity and measurement error of the SNAP participation variable and endogeneity of total expenditures are accounted for with the use of specialized econometric procedures.</p> <p>Although we find statistically significant effects of SNAP participation on non-durable good expenditures, we generally do not find evidence of differences in the marginal propensities to spend values on non-durables out of cash and SNAP benefits across a wide variety of model specifications and econometric procedures. Thus, we do not find evidence that households' income from SNAP benefits is treated any different than income from cash sources.</p>
Keywords	Measurement error, binary variable, Generalized Method of Moments, bounds

Project Title	Keeping the Value of the Farm: Expanding Market Opportunities Through Regional Branding
Principal Investigators	Tullaya Boonsaeng, Carlos Carpio – Texas Tech University Leah Mathews – University of North Carolina-Ashville Charlie Jackson, Allison Perrett, Katie Descieux – Appalachian Sustainable Agricultural Project
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	TTU component: \$124,918 (Expenditures 9/1/15-8/31/16 = \$44,309.09)
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 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.</p> <p>Results also identified age, gender and the respondent being the primary shopper as the main factors affecting willingness to pay for locally grown products in Western North Carolina.</p>
Keywords	Local foods, contingent valuation, food marketing

Project Title	Non-parametric Estimation of a Distribution Function with Interval Censored Data
Principal Investigators	Carlos Carpio – Texas Tech University Samuel Zapata – Texas A&M University
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2013
Ending Date	Ongoing
Project Objective	This project’s objective is to develop an approach for the estimation of the empirical distribution function of disjoint interval censored data using the nonparametric maximum likelihood function.
Project Summary and Accomplishments	Censoring is a very common condition in many economic applications. A special case of censoring is disjoint interval-censored (DIC) data, in which a random variable is observed only as a set of non-overlapping intervals. Particularly, DIC data is found on survey responses to closed-category questions, grouped data, and contingent valuation studies using payment card designs. Despite being a recurrent type of data, little attention has been given to the specific analysis of DIC data in the nonparametric literature. In this study, we develop an alternative approach for the estimation of the empirical distribution function of DIC data using the nonparametric maximum likelihood (ML) function. In contrast to the standard nonparametric method, our estimation approach does not require iterative numerical algorithms or the use of advanced statistical software packages. In fact, we demonstrate the existence of a simple closed-form solution to the nonparametric ML problem, where the empirical distribution, its variance, and measures of central tendency can be estimated by using only the frequency distribution of observations. Attributes of our estimation approach are illustrated using two empirical datasets: a contingent valuation dataset and another from a survey where the income variable is collected using intervals.
Keywords	Close-form solution, empirical likelihood, Mean bounds, Turnbull, variance-covariance matrix.

Project Title	Food Demand and Food Security in El Salvador
Principal Investigators	Carlos Carpio Luis Sandoval (student)
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.

Project Title	Economic Analysis of Alternative Livestock Production Systems in Honduras
Principal Investigators	Carlos E. Carpio, Mindy Brashears, Sara Trojan – Texas Tech J. Ricardo Gomez – Agroindustrias Del Corral, Honduras
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2014
Ending Date	Ongoing
Project Objective	This study evaluates the profitability and production efficiency of three finishing beef production systems using data from on-farm trials conducted in Honduras in 2014 and 2105. The first on-farm trial evaluated a grazing production system supplemented with concentrate and silage. The other trials evaluated confined beef production systems with two different diets: 1) Palm kernel meal based diet; and 2) Sugar cane - meal based diet.
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>Overall, current study results indicate that from a food production point of view, the palm kernel meal based system is the most efficient, since it produces higher carcass weight per year within a smaller area of land. Although the confined systems require an initial investment to construct the required facilities and higher feeding costs, both systems were shown to generate a higher cash flow in a shorter period of time compared to the grazing system. The results also reveal that selection of the diet used in a confined system can have very important profit implications.</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 Investigators	Benaissa Chidmi Hanan Shkokani
Departmental Involvement	Agricultural and Applied Economics Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2015
Ending Date	August 2016
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 and Accomplishments	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. 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.
Keywords	Transmission mechanism, monetary policy, European monetary union.

Project Title	Foreign Direct Investments in Some Middle-Eastern and North-African Countries
Principal Investigators	Benaissa Chidmi Youssef Ettoumi
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2015
Ending Date	August 2016
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 and 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	Drilling for Innovation: Economic Diversification through the Determination, Distinction, and Development of Renewable Entrepreneurship Clusters
Principal Investigators	Benaissa Chidmi - AAEC Abdallah Assaf, Ronald Mitchell - DM
Departmental Involvement	Agricultural and Applied Economics Department of Management
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2015
Ending Date	August 2016
Project Objective	The primary purpose of this study is to examine the effect of several public policy variables, institutionalization of innovation pace and stability variables, and a newly-conceptualized Economic Inductance Index, on the development and growth of renewable entrepreneurship clusters.
Project Summary and Accomplishments	What a country produces matters, because diversity of production – economic diversification – is tied to the social well-being of its population. While considerable research in the fields of urban and regional economics has been conducted on economic diversification, there is still a limited understanding of what macro-level variables lead to economic diversification within a country. To address this gap, the study introduces the notion of renewable entrepreneurship: an economic system for the generation of business that is not critically resource dependent for the continuity of its contribution to the economy, arguing that it provides an appropriate vehicle to achieve economic diversification and thereby, continuing economic prosperity.
Keywords	Renewable entrepreneurship, clusters, economic diversification.

Project Title	Demand for Gasoline in U.S.: An Asymmetric Spatial Analysis
Principal Investigators	Benaissa Chidmi - AAEC Najmeh Kamyabi, Michael Noel - Economics
Departmental Involvement	Agricultural and Applied Economics Department of Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2015
Ending Date	August 2016
Project Objective	The primary purpose of this study is to examine the effect of several public policy variables, institutionalization of innovation pace and stability variables, and a newly-conceptualized Economic Inductance Index, on the development and growth of renewable entrepreneurship clusters.
Project Summary and Accomplishments	Using panel data of 48 states during the period 1998-2013, the study examines the hypothesis that the demand of gasoline reacts asymmetrically to variations in price. The paper decomposes the gasoline price into three component series to develop an econometric model for gasoline demand that is capable of capturing the potential imperfectly reversible relationship and test for presence or absence of perfect reversibility. Instrumental variables used to correct for the potential endogeneity of the price of gasoline. Because of adjacent states and the possible heterogeneity between states, the spatial autocorrelation is applied. This research helps to predict energy consumption as the economy improves and to assist tax policy decisions. The study shows in national level, there is an asymmetry reversibility in gasoline demand with respect to different type of price. Although, in regional levels the results are different across geographical location of regions.
Keywords	Gasoline demand, asymmetry, spatial correlation.

Project Title	Equilibrium Analysis of Crop Insurance
Principal Investigators	Stephen Devadoss, Darren Hudson, Turker Dogruer – Texas Tech Jeff Luckstead – University of Arkansas
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2016
Ending Date	December 2018
Project Objective	The purpose of this study is to analyze the supply and demand for crop insurance and determine the equilibrium premium rates and the volume of insurance transacted.
Project Summary and Accomplishments	Studies have shown that crop insurance markets do not necessarily operate under perfect competition. Consequently, examining the supply of crop insurance under alternate market structure is essential to accurately estimate the volume of insurance sold. Demand for crop insurance largely depends on premium rates, yield and price uncertainty. However, premium subsidies provided by the Farm Bill enhance the incentives for farmers to participate in the crop insurance. This study will model both supply side and demand side of crop insurance markets and quantify the equilibrium premiums and volume of crop insurance.
Keywords	Crop insurance, demand, market equilibrium, supply.

Project Title	Technology, Crop Insurance, and Cotton Production in India
Principal Investigators	Stephen Devadoss, Darren Hudson, Turker Dogruer – Texas Tech Jeff Luckstead – University of Arkansas
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2016
Ending Date	December 2018
Project Objective	The objective of this project is to comprehensively analyze the effects of crop insurance policies on Bt cotton production in India.
Project Summary and Accomplishments	India is a leading producer and user of cotton. However, cotton production is subject to weather vagaries and faces significant variability. This variability is mitigated by drought resistant varieties developed from Bt cotton production. In addition, crop insurance also helps to protect cotton farmers from weather and yield risk. This study will examine theoretically and quantify empirically the effects of crop insurance under Bt cotton technology developments. This study will be part of Turker Dogruer’s dissertation.
Keywords	Bt cotton, crop insurance, India, production, risk management.

Project Title	Crop Insurance and Wheat Production
Principal Investigators	Stephen Devadoss – Texas Tech University Jeff Luckstead – University of Arkansas
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2016
Ending Date	December 2018
Project Objective	The objective of this study is to develop a model for a risk-averse farm that fully endogenizes the link between input choice and idiosyncratic risk at the farm level for policy analysis.
Project Summary and Accomplishments	Two key problems exist in evaluating the effects of farm policies on farm-level production decisions: 1) farm-level data is not readily available and 2) lack of methods to measure how input choices influence yield and the idiosyncratic risk that is unique to an individual farmer. To address these issues, we consider a risk-averse farm that fully endogenizes the link between input use and idiosyncratic risk at the farm level. We then propose a new method to calibrate the stochastic part of the production function based on the RMA rating system and NASS data to establish this link. We apply our model and calibration method to representative wheat farmers. Our results show that the elasticities of farm-level variance to yield range from -0.40 to -0.55, which are essential to accurately estimate the premiums. Higher RP coverage levels generally result in lower yields and vice-versa, indicating the moral hazard effect of crop insurance. The certainty equivalent results indicate that farmers prefer higher coverage levels despite the higher premium rates and lower premium subsidies because of greater likelihood of farmers receiving indemnity payments.
Keywords	Calibration, crop insurance, idiosyncratic farm-level risk, technology, policy analysis.

Project Title	A Dynamic General Equilibrium Analysis of Immigration Policies and Agricultural Labor Markets
Principal Investigators	Stephen Devadoss – Texas Tech University Jeff Luckstead – University of Arkansas Jeff Reimer – Oregon State University
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$399,867
Funding Agency	USDA/AFRI/NIFA
Beginning Date	January 2016
Ending Date	January 2018
Project Objective	<p>The overall goal of this project is to comprehensively analyze the dynamics of farm labor market in the U.S. agricultural sector and the effectiveness of immigration policies in reconciling labor supply and demand in the short- and long-run. The specific objectives are to:</p> <ol style="list-style-type: none"> 1) model the economic and social motives of legal and illegal immigrant labor entrance to the United States, 2) ascertain the demand for farm laborers in production of various crops, 3) examine the impacts of the expansion of the guest-worker programs on farm labor supply and U.S. agricultural operations, 4) determine the effects of tighter border and domestic enforcement policies on illegal immigration and agriculture, 5) investigate the consequence of proposed U.S. legislation on legalizing the status of the current unauthorized immigrants on farm labor supply and future immigrant entrance, and 6) draw policy implications and provide recommendations to alleviate farm labor shortages.
Project Summary and Accomplishments	<p>U.S. agriculture, particularly labor-intensive crops, rely heavily on immigrant farm workers. Given the inadequate supply of the current guest-worker program for meeting the farm labor demand, U.S. farmers are facing a labor shortage. Furthermore, worksite and border enforcements and the recent U.S. economic recession have exacerbated farm labor scarcity. The farm labor market is clearly strained. Research is needed to study the effectiveness of the guest-worker program, border and domestic enforcements, proposed immigration reforms, and macroeconomic conditions.</p>
Keywords	Border control, deportation, farm labor, labor-intensive agricultural production.
Important	Two manuscripts have been completed and submitted:

Publications and Presentations

Stephen Devadoss and Jeff Luckstead, "A Dynamic Analysis of U.S.-Mexican Farm Labor Markets."

Edward Osei, Syed Jafri, and Stephen Devadoss "Mexican Migrant Labor in Southwestern U.S. Agriculture: Complementary or Substitutionary?" under review at Journal of Agricultural and Applied Economics.

Project Title	Implications of Transatlantic Trade and Investment Partnership and Trans-Pacific Partnership for Food Processing Sector
Principal Investigators	Stephen Devadoss– Texas Tech University Jeff Luckstead – University of Arkansas
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	January 2016
Ending Date	December 2018
Project Objective	<p>The overall goal of this project is to comprehensively analyze the effects of TTIP and TPP trade liberalization on the value-added food and beverage sector. The specific objectives are to:</p> <ol style="list-style-type: none"> 1. formulate a theoretical model characterizing <ol style="list-style-type: none"> (a) the monopolistic competition and firm-level heterogeneity in the food processing industry to analyze the effects of trade, and (b) MNEs to assess the effects of cross-border FDI in the food processing sector; 2. implement the theoretical model in objective 1 to empirically quantify the effects of i) TTIP between the United States and the European Union, ii) TPP between the United States and trans-Pacific countries, and iii) TTIP and TPP simultaneously on production, productivity, consumption, trade, and welfare for the <ol style="list-style-type: none"> (a) aggregate food processing industry and (b) prominent segments (dairy products, beverages, meat products, and processed vegetables) of this industry; 3. draw policy implications from these trade liberalization analyses and provide recommendations for future trade agreements to policy makers and food producers.
Project Summary and Accomplishments	<p>Processed food exports increased from \$37 billion in 1998 to \$104 billion in 2012. Also, foreign direct investments in food production expanded from \$108 billion in 1998 to \$475 billion in 2012. Two major markets for U.S. food exports are the EU and East Asian countries, but these countries impose substantial tariff and non-tariff barriers. The United States is actively negotiating the Transatlantic Trade and Investment Partnership (TTIP) with the EU and Trans-Pacific Partnership (TPP) with Pacific Rim countries, which will</p>

enhance market access. Food processing firms vary in sizes and engage in monopolistic competition in highly differentiated products.

Keywords

European Union, Trans-Atlantic trade and investment partnership, United States

Important Publications and Presentations

Luckstead, J., and S. Devadoss, "Impacts of TTIP on Processed Food Trade under Monopolistic Competition and Firm Heterogeneity," American Journal of Agricultural Economics, 98(5), 2016: 1-14.

Dhamodharan, M., S. Devadoss, and J. Luckstead, "Imperfect Competition, Trade Policies, and Technological Changes in the Orange Juice Market," Journal of Agricultural and Resource Economics, 41(2), 2016: 189-203.

Project Title	Welfare Analysis of the U.S.-Mexican Tomato Suspension Agreement
Principal Investigators	Stephen Devadoss– Texas Tech University
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2016
Ending Date	December 2018
Project Objective	The objective of this study is to investigate the effects of the U.S.-Mexican tomato Agreement on three broad categories of tomatoes [greenhouse, field, and small (cherry & grape)] tomatoes on prices, supply, demand, trade, and welfare to understand the gains and losses of producers and consumers.
Project Summary and Accomplishments	<p>In 1996, the United States and Mexico signed the Suspension Agreement which sets a minimum/floor price on tomato imports from Mexico. This agreement was re-signed in 2013, covering many tomato categories (field, greenhouse, and cherry & grape), each with distinct minimum import price.</p> <p>This study develops a three-country spatial equilibrium trade model of the United States, Mexico, and Canada to analyze the effects of the recent Agreement on prices, production, consumption, trade flows, and welfare in each country and for each tomato category. While only the United States and Mexico are signatories, Canada was included since the U.S. minimum price distorts prices across the region.</p> <p>For the United States, welfare is negative across three tomato categories, with producers gaining but consumers losing more, with field tomatoes having the highest net loss (-\$57.04 million). Due to consumer gains and quota revenues ameliorating much of the producer surplus loss, Mexico also gains across each category, in particular field tomatoes (\$46.85 million). Canada gains in field and cherry & grape tomatoes (\$0.59 and \$0.01 million, respectively) though they lose for greenhouse tomatoes (-\$0.59 million). For each category of tomatoes, the sum of welfare for all three countries is negative, implying a deadweight loss.</p>
Keywords	Mexico, tomato trade, United States, welfare analysis.
Important Publications and Presentations	Kosse, E., and S. Devadoss, “Welfare Analysis of the U.S.-Mexican Tomato Suspension Agreement,” <u>Journal of Agricultural and Applied Economics</u> , 2016 (forthcoming).

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	USDA Office of the Chief Economist
Beginning Date	September 2015
Ending Date	August 2016
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.

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	\$36,000 – Total expenditures 9/15-8/16 = \$17,700
Funding Agency	Cotton Foundation
Beginning Date	June 2014
Ending Date	August 2016
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 2006-2015. An analysis of the relationship between the sustainability metrics and profitability was completed and presented at the 2016 Beltwide Cotton Conference.
Keywords	FieldPrint calculator, sustainability
Important Publications and Presentations	Gillum, Miranda and Phillip Johnson. 2015. Fieldprint Calculator: Results from the Texas High Plains. Proceeding of the 2015 Beltwide Cotton Conferences p. 689-692. Gillum, Miranda and Phillip Johnson. 2016. Fieldprint Calculator: The Effects of Irrigation and Tillage Practices on Sustainability in the Texas High Plains. Proceeding of the 2016 Beltwide Cotton Conferences p. 812-817. M.S. Thesis: Analysis of the Effects of Physical Sustainability on Profitability for Crop Production in the Southern High Plains of Texas by Miranda Gillum Gillum, Miranda, Phillip Johnson, Darren Hudson, and Ryan Williams. Fieldprint [®] Calculator: An Evaluation of the Effects of Management Systems on Physical Sustainability in the Southern High Plains of Texas by Published in Crops & Soils Magazine.

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 9/15 – 8/16 \$13,507 Total Expenditures 1/14 – 9/15 \$86,761
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 Second Annual “Water College” was held in January 2016 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 – Texas Tech University
Rachna Tewari – University of Tennessee at Martin

Departmental Involvement Agricultural and Applied Economics

Funding Amount TBD

Funding Agency TBD

Beginning Date October 2015

Ending Date Ongoing

Project Objective Integrate personal financial planning and with farm business management. Joint project with the University of Tennessee at Martin.

Project Summary and Accomplishments Project ongoing, seeking external funding opportunities.

Keywords Farm succession, personal financial planning.

Project Title	Women in Agriculture: Characteristics of Women Decision-Makers and Factors Determining Agricultural Management Practices
Principal Investigators	Kelly Lange Donna Mitchell Sanja Zivkovic
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	TBD
Funding Agency	TBD
Beginning Date	October 2015
Ending Date	Ongoing
Project Objective	Investigate decision-making differences of male versus female agricultural producers, examine opportunities and challenges women agricultural operators encounter, and utilize an experimental economics approach to explore gender differences in natural resource valuation and management.
Project Summary and Accomplishments	Project ongoing, seeking external funding opportunities.
Keywords	Women, farm management, production agriculture.

Project Title	Enhancing Teaching Effectiveness in Agricultural Economics via Classroom Assessment Techniques
Principal Investigators	Kelly Lange – Texas Tech University Rachna Tewari – University of Tennessee at Martin Jacob Brimlow – California State University
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	TBD
Funding Agency	TBD
Beginning Date	June 2016
Ending Date	Ongoing
Project Objective	Utilize multiple classroom assessment techniques (CAT) among introductory agricultural economics, farm management, and agricultural finance courses at multiple institutions (TTU, UTM, and CSU-Chico) in order to evaluate teaching effectiveness in agricultural economics courses.
Project Summary and Accomplishments	Project ongoing, seeking external funding opportunities.
Keywords	Agricultural economics, teaching effectiveness, classroom assessment techniques.

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 (9/15 - 8/16, \$19,285)
Funding Agency	USDA – Economic Research Service, FoodAPS 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>This paper examines the relationship between SNAP participation and prices paid for food items. To test this relationship, we develop an expensiveness index following the method of Aguiar and Hurst (2007) and use the FoodAPS data set. Using both the ordinary least squares method and controlling for endogeneity using an instrumental variables approach, we found SNAP participation did not hold a statistically significant relationship with the prices paid for food items when we controlled for consumer behavior and food market variables. This suggests that SNAP participants are not systematically disadvantaged in their food purchases. Additional efforts to further educate SNAP participants of effective shopping and budgeting habits may be fruitful in helping households pay comparatively lower food prices.</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 (9/15 - 8/16, \$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 (9/15 - 8/16, \$0)
Funding Agencies	The Obesity Research Cluster/Texas Tech University Laura W. Bush Institute for Women's Health
Beginning Date	January 2015
Ending Date	July 2017
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 Funding Agency	None.
Beginning Date	January 2014
Ending Date	May 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 US 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. Two research papers were selected for presentation at the SAEA and AAEC 2016 meetings
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. 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 A research paper was selected for presentation at the 2016 Annual Meetings of the SAEA.

Project Title	Japanese Sorghum Market: Performance and Competition of US Exporters
Principal Investigator	Jaime E. Malaga and Kazuyoshi Ishida
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2015
Ending Date	December 2016
Project Objective	To assess the factors behind declining of US market share in the Japanese sorghum market in in favor of Australian sorghum and corn using alternative demand estimation models. .
Project Summary and Accomplishments	The US 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 US sorghum price is cheaper in that country. The ratio of US vs Australian sorghum prices in Japan during the last 20 years does not show too much variability, which seems to imply that the US sorghum has not lost price competitiveness in the Japanese market. Factors other than the price may be affecting the market share of the US sorghum in Japan. Therefore, our research objective is to confirm, using historical data (from US and Japanese sources) and sound methodology, that grain quality differential might be the variable explaining the loss of US market share that country. This analysis will be helpful in terms of allowing the US sorghum producers to regain market share on the important Japanese market. Parameters have been estimated and results have been presented at several professional meeting including the Agricultural and Applied Economics Association (AAEA)
Keywords	Grain sorghum, Japan, international trade.

Project Title	International Partial Equilibrium Model of Sorghum Supply, Demand and Trade
Principal Investigator	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	December 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.

Project Title	Latin American Competition for the Growing US Fruit and Vegetable Markets.
Principal Investigator	Jaime E. Malaga
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	January 2016
Ending Date	December 2016
Project Objective	Assess the potential impacts of the FSMA Act on US F/V markets competition. .
Project Summary and Accomplishments	<p>US fruit and vegetable consumption has been increasing steadily over recent years at a rate above all other food groups and Latin American countries have been expanding their market share of the US domestic market approaching a 50% level.</p> <p>Free Trade Agreements, lower cost of production and counter seasonality are among the factors explaining the mentioned trend. Nevertheless, foodborne illness outbreaks in the US have been linked to some produce imports and USDA has put in place a new Food Safety and Modernization Act (FSMA) requiring both US and imported produce to comply with the new strict standards. This process may imply important changes on LA countries' market shares. Countries with better capabilities to follow new procedures will be able to expand their presence in the US market at expense of smaller countries affecting the positive impact of FTAs on their agricultural exports sectors. A presentation on the topic was delivered at the 2016 Annual Meeting of the Agricultural and Applied Economics Association in Boston MA where potential collaboration with USDA agencies was discussed.</p>
Keywords	Fruit and vegetable markets, international trade.

Project Title	Governing Natural Resources in the American West
Principal Investigators	Adam Martin
Departmental Involvement	Agricultural and Applied Economics Free Market Institute
Funding Amount	\$50,000
Funding Agency	Charles Koch Foundation
Beginning Date	July 2016
Ending Date	Ongoing
Project Objective	To bring together two groups of social scientists who work on natural resource issues to explore gains from trade: (a) quantitative applied economists who focus on the technical conditions of economic activity, and (b) political economists and other social scientists who focus on qualitative work and the institutions that govern economic activity, focusing on the question of how the natural resources of western states might be governed more effectively.
Project Summary and Accomplishments	Recruitment of scholars will commence in Fall 2016 for an anticipated research colloquium to be held at Texas tech in Fall 2017.
Keywords	Institutions, natural resources, political economy, property rights
Important Publications and Presentations	

Project Title	Sustaining Agriculture through Adaptive Management to Preserve the Ogallala Aquifer under a Changing Climate
Principal Investigators	Donna Mitchell
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	Total: 2,400,000; Amount to TTU: 211,000; My amount: 57,160
Funding Agency	USDA-NIFA-CAP
Beginning Date	2016
Ending Date	2019
Project Objective	Objectives are to: 1) integrate hydrologic, crop, soil, and climate models; 2) develop the best irrigation technologies, tools, and crop management practices; 3) analyze social, policy, and economic frameworks to identify incentives and policies for adaptive management; and 4) enable the adoption of tools and strategies to improve water conservation.
Project Summary and Accomplishments	Our systems-based approach will foster water conservation through the development of cost-effective, adoptable and sustainable practices and technologies for agricultural producers and processors. We will work in close collaboration with local groundwater management districts and utilize a network of research and extension sites to ensure an integrated, aquifer-wide approach and build long-range capacity for adaptive management. Our team represents a wealth of experience and this proposal represents an opportunity to leverage ongoing work to develop a framework that will create wide-scale changes in the management of the OAR and serve as a global model for groundwater management
Keywords	Ogallala, sustainability, conservation.

Project Title	An Economic Analysis to Determine the Feasibility of Groundwater Supplementation from the Dockum Aquifer
Principal Investigators	Phillip Johnson, Donna Mitchell
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$10,000
Funding Agency	High Plains Underground Water Conservation District
Beginning Date	2015
Ending Date	2016
Project Objective	Objectives are to: 1) Determine the costs associated with supplemental pumping from the Dockum and 2) Estimate the impact of irrigation from the Dockum on water availability, crop mix, crop yields and producer net returns over time.
Project Summary and Accomplishments	This project will provide insight into using the Dockum Aquifer as a viable water source for agricultural irrigation. The results will provide estimation of the optimal amount of water that can be produced from the Ogallala with supplemental production from the Dockum. These estimates will help producers in making decisions to invest in irrigation from the Dockum, and help policy makers in developing regulations relative to the Dockum.
Keywords	Ogallala, Dockum, sustainability.

Project Title	BHEARD Kenya Program
Principal Investigators	Shaikh M. Rahman
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$300,746 (9/15-8/16 = \$76,698)
Funding Agency	USAID/Michigan State University
Beginning Date	August 2015
Ending Date	July 2019
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 and 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 TTU component of this is two fully funded students from Kenya including fieldwork.
Project Summary and Accomplishments	The two Ph.D. students from Kenya are currently proceeding well in our Ph.D. program in Agricultural Economics. The students have successfully finished the first year of their study. They are now are in the process of collecting and compiling data from several secondary sources that should form a key basis for their dissertation research and future publications.
Keywords	BHEARD, USAID, Feed the Future, Kenya, food security.
Important Publications and Presentations	The students have both submitted article abstracts for presentation in the 2017 SAEA annual conference.

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	Agricultural and Applied Economics Agricultural Education and Communication Natural Resources Management Plant and Soil Science Landscape Architecture Animal and Food Sciences
Funding Amount	\$29,716
Funding Agency	United States Department of Agriculture
Beginning Date	May 2015
Ending Date	May 2016
Project Objective	<p>The objectives of this program are:</p> <ol style="list-style-type: none"> 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. <p>Design a research focus to determine the impact of undergraduate research on the graduates of colleges and departments of agriculture and natural resources.</p>
Project Summary and Accomplishments	<p>The program introduced in this project has created a successful model of faculty training for undergraduate research specifically in agriculture, natural resources, and climate change. As stated above, our educational need area has been: <i>Increasing Faculty Teaching Competencies; 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> The undergraduate research consortium was concluded with the last phase of training in April 2016, for the faculty from ten universities and state colleges in the South Plains. The creation of online resources and the dissemination through our professional organizations has improved the mentoring of undergraduate research by agriculture and natural resources faculty throughout the United States.</p>
Keywords	Undergraduate research, faculty training, agriculture, natural resources, climate change.

Project Title	Costs of Generating Electricity by Power Projects under the Clean Development Mechanism
Principal Investigators	Shaikh M. Rahman – Texas Tech University Randall Spalding-Fecher – Carbon Limits Grant Kirkman – UNFCCC Eric Haites – Margaree Consultants
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	2014
Ending Date	Ongoing
Project Objective	The objective of this research is to examine the cost structure of electricity generation by various types of power projects financed under the Clean Development Mechanism (CDM) of the Kyoto Protocol.
Project Summary and Accomplishments	Using CDM project data, cost of electricity generation and its variation across technology and over time and space are estimated applying alternative functional forms. Results show that the average cost of electricity decreases with the project scale and duration, and scale and duration effects significantly vary across underlying technology. Results also show that the distribution of the power projects in the CDM portfolio or a given location does not strictly follow the relative cost structure. About 68 percent of the CDM power portfolio consists of hydro and wind power projects with relatively higher costs which account for about 46 percent of total annual electricity generation by all projects. Methane avoidance/ reduction and landfill gas projects are the least cost categories for electricity generation, which account for only 9 percent of all power projects and 1.3 percent of annual electricity generation. At the observed scales of hydro and wind power projects, India has a comparative advantage over China. Still, the extent of both hydro and wind power projects in China is much larger than that in India, both by the number of projects and total expected electricity output. These results provide a basis for evaluating the overall competitiveness of alternative power sources for alternative CER price scenarios.
Keywords	Cost of electricity, Clean Development Mechanism, Kyoto protocol.
Important Publications and Presentations	The article is revised and resubmitted to Energy Economics in July 2016.

Project Title	Economic Freedom and Agricultural Productivity – Discovering the Linkages
Principal Investigators	Eduardo Segarra
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	Core departmental research funds
Funding Agency	
Beginning Date	September 2015
Ending Date	August 2017
Project Objective	To evaluate the 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 in agriculture.
Project Summary and Accomplishments	A graduate student (Maryam Almasifard) who is working on her Ph.D. in Agricultural and Applied Economics has been working on her dissertation proposal addressing this topic. 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

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 2014
Ending Date	August 2017
Project Objective	To find out what the core factors influencing technological innovation(s) (technological progress) in agriculture are, and what the impacts of variables such as planning horizon, discount rates, and 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 has been completed. A draft of a journal article has been completed and is in the process of being submitted for consideration in a national in-scope journal.
Keywords	Technological progress, advanced production systems in agriculture.

Project Title	Sustainability of Water Resource Use in the Hexi Corridor of China
Principal Investigators	Eduardo Segarra
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
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.
Project Summary and Accomplishments	A proposal which will be submitted for funding to the Chinese National Academy of Sciences is being developed in cooperation with Dr. Yue of Lanzhou University. Work regarding the collection of basic data and the formulation of potential simulation/optimization models to be used in this project is in progress. A visiting scholar (Kai Li) currently working on his Ph.D. in Ecological Management with Dr. Yue will be spending most of the 2016-2017 academic year working on this project.
Keywords	Water use sustainability, advanced production systems in agriculture

Project Title	Factors Influencing the Adoption of Precision Agricultural Practices in Cotton Production in the U.S.
Principal Investigators	Eduardo Segarra and Chenggang Wang
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	Core departmental research funds
Funding Agency	N/A
Beginning Date	August 2015
Ending Date	May 2017
Project Objective	To evaluate factors influencing the adoption of precision agricultural practices in cotton production in the U.S.
Project Summary and Accomplishments	The project was supported for several years by Cotton Incorporated and several surveys were elicited. This data is being used by a current Ph.D. student (Eric Asare) in his dissertation research. Eric Asare is in the middle of writing his dissertation. Preliminary results have been obtained and he should finish his dissertation within the 2016-2017 academic year.
Keywords	Precision farming, precision agriculture, technology adoption, advanced production systems in agriculture.

Project Title	Groundwater Use in the Texas High Plains
Principal Investigators	Chenggang Wang
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$13,000 (\$1,200 from September 2015 to August 2016)
Funding Agency	Texas A&M University/Texas AgriLife Research – Lubbock
Beginning Date	Jan 2013
Ending Date	Jan 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	In the 2015-2016 project year our research effort was focused on the regional analysis of the optimal allocation of groundwater resources. 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.
Keywords	Groundwater, optimization, deficit irrigation.

Project Title	A Socioeconomic Survey of Pastoralism in the Qinghai-Tibet Plateau
Principal Investigators	Chenggang Wang – Texas Tech University Zeng Tang – Lanzhou University
Departmental Involvement	Agricultural and Applied Economics College of Pastoral Science and Technology, Lanzhou University
Funding Amount Funding Agency	The College of Pastoral Science and Technology at Lanzhou University provided financial support for a two-month field research in five Tibetan autonomous prefectures of China.
Beginning Date	January 2016
Ending Date	To be determined
Project Objective	Understand the grazing behavior of Tibetan pastoralists; identify the socioeconomic factors associated with grassland degradation in the Tibetan plateau; and untangle the human and natural forces driving the process of grassland degradation. This pilot study is intended to pave the ground for a longitudinal study of Tibetan pastoralism and economic development.
Project Summary and Accomplishments	<p>The Tibetan Plateau is the source of major rivers in East Asia and Southeastern Asia, including China’s Yangtze, Yellow River, and South Asia’s Mekong River, Brahmaputra River, to name a few. Ninety percent of the runoff from Tibetan rivers goes through China, India, Vietnam, Cambodia, Laos, Thailand, Burma, Bangladesh, Bhutan, and Pakistan. Grassland degradation on the Tibetan plateau can lead to erosion and desertification, destabilizing water supply in those countries. Significant loss of irrigation water in Asia’s major food producing regions without doubt will impact the life of many people, especially the low-income, and create turbulence in the global commodity markets.</p> <p>Many factors have been identified in the literature to explain continuous grassland degradation on the Tibetan Plateau. Ninety five percent of the over 300 Tibetan pastoralists we interviewed said their grassland had been degrading. And the two most frequent explanations they offered are droughts and overstocking. Natural scientists have studied extensively the climatic impact on grassland degradation on the Tibetan plateau, yet little is known of the socioeconomic factors behind overstocking. The survey we conducted covers over 300 households in 11 counties of five Tibetan autonomous prefectures on the Qinghai-Tibet plateau. We placed our survey sites in the upstreams of three major Asian rivers, Yangtze, Yellow River, and Mekong, and our questionnaire covered a wide range of questions regarding household demographics, religion, land</p>

use rights, herd size dynamics, and grazing practices. The dataset is the first of its kind with extensive spatial coverage and rich socio-economic information. Since the official statistics published by Chinese government are notoriously unreliable, this dataset itself is of great value in solving the puzzle of overstocking on the Tibetan plateau.

Keywords

Grassland degradation; pastoralism; rural development

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	Unfunded.
Funding Agency	
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	We propose to improve the understanding of economically optimal irrigation management strategies when farmers face limited water availability with uncertain weather or when they account for intra-seasonal irrigation timing. Limited water availability may arise either due to a limited pumping capacity or due to legal restrictions. We analyze the optimal irrigated acreage, crop choice(s), and intensity of irrigation for a given field. We also propose to estimate yield response to water availability of the major crops grown in the Southern Ogallala Aquifer Region using statistical methods to analyze the response of historical non-irrigated yields to variations in soil moisture deficit across the Central United States. Our statistical

yield response curves will complement current estimates of yield response curves derived from agronomic field experiments.

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	Price Volatility and Residential Electricity Decisions
Principal Investigators	Ryan Williams Eric Cardella, Brad Ewing
Departmental Involvement	Agricultural and Applied Economics Rawls College of Business
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	September 2015
Ending Date	ongoing
Project Objective	Determine the extent to which price volatility influences consumer demand for residential electricity energy source.
Project Summary and Accomplishments	Consumer response to mean prices for electricity are well understood. However, due to the changing nature of energy source mix in the portfolio of residential electricity production, the volatility of energy source prices is likely to reach the consumer. We evaluate consumer preference for “green” electricity energy sources relative to the alternative under varying price volatility scenarios using a choice-based experiment via household survey. Our results suggest that price volatility in monthly rates significantly impacts respondents’ plan choices and, specifically, their decision to adopt the green power plan. In particular, increased volatility in the green power plan reduces the likelihood of respondents choosing the green plan, while increased volatility in the conventional plan increases the likelihood of respondents choosing the green plan.
Keywords	Wind energy, externalities, land use, avian habitats.
Important Publications and Presentations	Cardella, E., B.T. Ewing, and R.B. Williams. (2016) “Price volatility and residential electricity decisions: Experimental evidence on the convergence of energy generating source.” <i>Energy Economics</i> . http://dx.doi.org/10.1016/j.eneco.2016.07.012

Project Title	An Economic Valuation on the External Cost of Milk Packaging and Delivery Options
Principal Investigators	Ryan Williams, Aaron Benson Clinton Neill – graduate student
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	N/A
Funding Agency	N/A
Beginning Date	January 2013
Ending Date	September 2015
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
Important Publications and Presentations	Neill, C.L.* and R.B. Williams . 2015. "An economic valuation on the external cost of alternative milk packaging." <i>Journal of Food Distribution Research</i> 46(3):68-80. https://www.fdrsinc.org/wp-content/uploads/2015/11/5-112.pdf

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 – ARS, 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 – ARS, 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 – ARS, 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	Consumer Preference for Alternative Milk Packaging
Principal Investigators	Ryan Williams Clinton Neill – graduate 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
Important Publications and Presentations	Neill, C.L.* and R.B. Williams . (forthcoming) “Consumer preference for alternative milk packaging: The case of an inferred environmental attribute.” <i>Journal of Agricultural and Applied Economics</i> .

Project Title	Cochran Program for Serbia Developing of the Food Processing Industry Associations and Cooperatives – Eastern Europe and Eurasia
Principal Investigators	Sanja Zivkovic and Olga Murova
Departmental Involvement	Agricultural and Applied Economics
Funding Amount	\$12,279.30
Funding Agency	United States Department of Agriculture – Foreign Agricultural Services
Beginning Date	July 9,2016
Ending Date	July 23, 2016
Project Objective	The main objective of the Cochran Fellowship Program was to assist Fellows in better understanding the cooperative systems and food processing in the U.S.
Project Summary and Accomplishments	<p>The program was organized as a two-week training program with daily lectures and visits to the different types of cooperatives and farms located in Lubbock and surrounding areas. During lectures the Fellows were introduced with topics such as: principles of cooperatives, historical development of cooperatives in the U.S., cooperatives in other countries, structure and scope of agricultural cooperatives, main features distinguishing supply and marketing cooperatives, product and pricing strategies, managerial skills, directors and managers, and communication among members, directors and managers. Afternoon daily visits to farms, different food processor associations and cooperatives supported information presented in the classroom and offered the opportunity for Fellows to meet managers and ask questions.</p> <p>We believe that our program provided Fellows with sufficient knowledge on agricultural cooperatives and food processing in the U.S. that will help them face potential challenges in Serbia and implement strategies which will assure their success. We are confident that Fellows came back home with increased knowledge that will help them manage their businesses more successfully.</p>
Keywords	Cochran, agricultural cooperatives, food processing, fellows, Serbia

Appendix B
RESEARCH FUNDING
2015/16

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

September 1, 2014 through August 31, 2015

	Internal			External										
	Applied Economics	Endowments	Other	TOTAL INTERNAL	State			Federal			Private		GRAND TOTAL	
					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.			11,370	11,370				-	32,153		32,153			43,523
Operating	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

2015/16

JOURNAL ARTICLES

Arguello, P., J. Malaga, B. Chidmi and J. Lopez. "The Dairy Industry's Derived Demand for Feed Grains and its effect on the Cottonseed Market." *Texas Journal of Agriculture and Natural Resources*, 28: 33-49. 2015.

Bian, Dacheng, Ryan Williams, Aaron Benson, and Eduardo Segarra. "The Effects of Policy Implementation Uncertainty on Groundwater Extraction," *Journal of Contemporary Water Research and Education*, 158: 34-45. 2016.

Bologna, Jamie. "Contagious Corruption, Informal Employment, and Income: Evidence from Brazilian Municipalities." *The Annals of Regional Science*, (forthcoming).

Bologna, Jamie. "Corruption, Product Market Competition, and Institutional Quality: Empirical Evidence from the U.S. States," *Economic Inquiry*, (forthcoming).

Bologna, Jamie. "The Effect of Informal Employment on Income Levels in Brazil," *Journal of Comparative Economics*, (forthcoming).

Bologna, Jamie and Andrew T. Young. "Crises and Government: Some Empirical Evidence," *Contemporary Economic Policy*, (forthcoming).

Bologna, Jamie, Donald J. Lacombe, and Andrew T. Young. "A Spatial Analysis of Incomes and Institutional Quality: Evidence from U.S. Metropolitan Areas," *Journal of Institutional Economics*, (forthcoming).

Bologna, Jamie and Amanda Ross. "Entrepreneurship and Corruption: Evidence from Brazilian Municipalities," *Public Choice*, 165(1): 59-77. 2015.

Bologna, Jamie. "A Spatial Analysis of Entrepreneurship and Institutional Quality: Evidence from U.S. Metropolitan Areas," *Journal of Regional Analysis and Policy*, 44(2): 109-131, 2015.

Carpio, C.E. and O. Isengildina-Massa. "Does Government Sponsored Advertising Increase Social Welfare? A Theoretical and Empirical Investigation." *Applied Economic Perspectives and Policy*, 38(2): 239-259. June 2016.

Correa, Liliana, Debra Reed, Barent McCool, Mary Murimi, Conrad Lyford. "The Effect of a Pilot Nutrition Education Intervention on Perceived Cancer Risk in a Rural Texas Community," *Texas Public Health Journal*, 16: 14-19. 2016.

Devadoss, S., M. Gibson, and J. Luckstead. "The Impact of Agricultural Subsidies on the Corn Market with Farm Heterogeneity and Endogenous Entry and Exit," *Journal of Agricultural and Resource Economics*, 41(3): 1-25. 2016.

Devadoss, S. and J. Luckstead. "Size Distribution of U.S. Lower-Tail Cities," *Physica*, 444: 158-162. 2016.

- Devadoss, S. and J. Luckstead. "Can a Corrupt Ruling Party Win a Reelection Through Vote Buying?" *Applied Economics*, 48(1): 18-23. 2016.
- Devadoss, S., J. Luckstead, D. Danforth, and S. Akhundjanov. "The Power Law Distribution for Lower Tail Cities in India," *Physica*, 442: 193-196. 2016.
- Dhamodharan, M., S. Devadoss, and J. Luckstead. "Imperfect Competition, Trade Policies, and Technological Changes in the Orange Juice Market," *Journal of Agricultural and Resource Economics*, 41(2): 189-203. 2016.
- Gillum, M., P. Johnson, D. Hudson and R. Williams. "FieldPrint Calculator: A Tool to Evaluate the Effects of Management on Physical Sustainability". *Crop Soils* 49:26-29. 2016.
- Isengildina-Massa, O., S.D. Zapata, C. Carpio, and D. Lamie. "Does E-Commerce Help Farmers Markets? Measuring the Impact of MarketMaker." *Journal of Food Distribution Research*, 47(2): 1-18. July 2016.
- Khan, A. and O. Murova. "Productive Efficiency of Public Expenditures: A Cross-State Study." *State and Local Government Review*, 47(3). 2016.
- Kosse, E. and S. Devadoss. "Welfare Analysis of the U.S.-Mexican Tomato Suspension Agreement," *Journal of Agricultural and Applied Economics*, 2016 (forthcoming).
- Lange, K., J.W. Johnson, P.N. Johnson, D. Hudson, C. Wang, and A.W. Gustafson. "Intergenerational Transfers of Managerial Control in U.S. Family Farm Businesses." *American Journal of Experimental Agriculture*, 9(6): 1-12. 2015.
- Lange, K., J.W. Johnson, P.N. Johnson, D. Hudson, C. Wang, and A.W. Gustafson. "Farm Succession in Texas: A Qualitative Approach." *International Journal of Agricultural Management*, in press.
- Luckstead, J. and S. Devadoss. "Impacts of TTIP on Processed Food Trade under Monopolistic Competition and Firm Heterogeneity," *American Journal of Agricultural Economics*, 98(5): 1-14. 2016.
- Luckstead, J. and S. Devadoss. "Pareto Tails and Lognormal Body of U.S. Cities Size Distribution," *Physica*, 2016 (forthcoming).
- March, Raymond, Conrad Lyford and Benjamin Powell. "Causes and Barriers to Increases in Economic Freedom", *International Review of Economics* August 2016. doi:10.1007/s12232-016-0263-2.
- March, Raymond, Adam Martin and Audrey Redford. "The Substance of Entrepreneurship and the Entrepreneurship of Substances", *Journal of Entrepreneurship and Public Policy*, 5: 201-220. 2016.

- Martin, Adam. "Degenerate Cosmopolitanism". *Social Philosophy and Policy*, 32: 74-100. 2016.
- Martin, Adam and Wolf von Laer. "Regime Uncertainty and the Great Recession: A Market Process Perspective". *The Independent Review*, 5: 547-568. 2016.
- Mitchell, Donna, Darren Hudson, Ryan Williams, Phillip Johnson. "A Monte Carlo Analysis on the Impact of Climate Change on Future Crop Choice and Water Use." *Food Security*, under review.
- Neill, C.L. and R.B. Williams. "An Economic Valuation on the External Cost of Alternative Milk Packaging." *Journal of Food Distribution Research* 46(3): 68-80. 2015.
<https://www.fdrsinc.org/wp-content/uploads/2015/11/5-112.pdf>.
- Qin, L. and C. Wang. "Labor Employment and Social Security in China's First Village of Reforming and Anhui Province." *China Agricultural Economic Review*. (forthcoming).
- Rada, N., C. Wang, and L. Qin. "Subsidy or Market Reform? Rethinking China's Farm Consolidation Strategy." *Food Policy*, Vol. 57: 93-103. 2016.
- Rahman, S.M., A. Dinar, and D. F. Larson. "The Incidence and Extent of CDM across Developing Countries," *Environment and Development Economics*. Vol. 21(4), 415-438. 2016. Available in CJO 2016 doi:10.1017/S1355770X15000388.
- Rahman, S.M., R.-S. Fletcher, E. Haites, and G.A. Kirkman. "Costs of Electricity Generation by Power Projects under the Clean Development Mechanism." Revised and resubmitted to *Energy Economics* in July 2016.
- Rahman, S.M., D.F. Larson, and A. Dinar. "Costs of Greenhouse Gas Emissions abatement under the Clean Development Mechanism of Kyoto Protocol." *Climate Change Economics*, 6(1), 15500005: 1-34. 2015.
- Ramirez, O.A., C.E. Carpio, and A.J. Collart. "Are the Federal Crop Insurance Subsidies Equitable Distributed? Evidence from a Monte Carlo Simulation Analysis." *Journal of Agricultural and Resource Economics*, 40(3): 457-475. September 2015.
- Thapa, Janani, Conrad Lyford, Barent McCool, Barbara Pence, Audrey McCool, and Eric Belasco, "Improving Cancer Risk Awareness including Obesity as a Risk Factor for Cancer in a Small U.S. Community," *Journal of Cancer Education*, June 2016. doi:10.1007/s13187-016-1060-z.
- Willis, D.B., C.E. Carpio, and K.A. Boys. "Supporting Local Food System Development Through Food Price Premium Donations: A Policy Proposal." *Journal of Agricultural and Applied Economics*, 48(2): 192-217. May 2016.

Vorontikova, E. and S. Devadoss. "The Effects of Panama Canal Expansion of U.S. Dairy Trade Flows: West, East, and Gulf District Regions," *International Food and Agribusiness Management Review*, 19(A), 37-56, 2016.

BOOK CHAPTERS

Bologna, Jamie and Joshua C. Hall. "Economic Freedom Research: Some Comments and Suggestions," in Joshua C. Hall (eds.) *Economic Freedom and Economic Education, Ideas and Influence of James Gwartney*, Volume VI in *The Annual Proceedings of the Wealth and Well-Being of Nations*. 2014. Beloit, Beloit College Press.

Martin, Adam. "Austrian Methodology: A Review and Synthesis," *Oxford Handbook on Austrian Economics*, 2015, eds. Peter Boettke and Christopher Coyne (Oxford University Press).

TECHNICAL REPORTS

Gillum, M., P. Johnson, D. Hudson and R. Williams. 2016. "Fieldprint Calculator a tool to evaluate the effects of management on physical sustainability." *Crops & Soil Magazine*, Vol. 49 No. 1, p 26-29, February 5, 2016.

Kellison, R., *et al.* 2015. *An Integrated Approach to Water Conservation for Agriculture in the Texas Southern High Plains*. Texas Alliance for Water Conservation 10th Annual Report submitted to the Texas Water Development Board, under project number 141G-44-B819, 280 pgs., College of Agricultural Sciences and Natural Resources, Texas Tech University. December 2015.

Liu, B., D. Hudson, and D. Ethridge. *Global Cotton Baseline: 2015-2023*. ICAC Baseline Report, March 2014.

Ritchie, G. and O. Murova. Report to funding agency Advanta US. *An Integrated Approach to Compare Sorghum Lines over a Range of Irrigation Levels in West Texas*. 2015.

Sosebee, R., C. Villalobos, P. Johnson, and D. Mitchell. 2015. "Timeliness of Restocking Southwestern Rangelands after a Drought." *Rangelands Issues*, Vol 4 (1).

Zhou, X., B.C. English, C.N. Boyer, R.K. Roberts, J.A. Larson, D.M. Lambert, M. Velandia, L.L. Falconer, S.W. Martin, S.L. Larkin, K.P. Paudel, A.K. Mishra, R.M. Rejesus, C. Wang, E. Segarra, and J.M. Reeves. *Precision Farming by Cotton Producers in Fourteen Southern States: Results from the 2013 Southern Cotton Farm Survey*. 2015. Research Series 15-001, Department of Agricultural and Resource Economics, University of Tennessee, Knoxville, Tennessee.

PROCEEDING PAPERS

Aborisade, O., C.E. Carpio, L. Mathews, 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." *Proceedings of the Southern Agricultural Economics Association Conference*, February 6-9, 2016, San Antonio, TX.

Boonsaeng, T. and C.E. Carpio. "Data Collection Period and Food Demand System Estimation using Cross Sectional Data." Proceedings of the Southern Agricultural Economics Association Conference, February 6-9, 2016, San Antonio, TX.

Dhakal, C. K., K. Y. Lange, M. N. Parajulee, and E. Segarra, 2016. "Effects of Soil Nitrogen Rates on Residual Soil N, Plant Growth Parameters, Yield, and Quality: An Economic Analysis." Proceedings of the 2016 Beltwide Cotton Conferences, Cotton Economics and Marketing Conference Section, CD-ROM. Selected for presentation at the Beltwide Cotton Conferences. Co-sponsored by the National Cotton Council and the Cotton Foundation, January 5-7, 2016, New Orleans, Louisiana.

Gao, Yang, Ryan Williams and Donna Mitchell. "Cap and Trade Markets for Groundwater: Efficiency and Distributional Effects of the Permit Allocation Mechanism," Southern Agricultural Economics Association Conference, February 6-9, 2016, San Antonio, TX. <http://purl.umn.edu/230015>.

Gillum, Miranda and Phillip Johnson. "FieldPrint Calculator: The Effects of Irrigation and Tillage Practices on Sustainability in the Texas High Plains." Proceedings of the Beltwide Cotton Conference, January 5-7, 2016. New Orleans, LA.

Liu, B. and D. Hudson. "The Impact of an Ethanol Plant on Regional Cotton Production." Proceedings of the Beltwide Cotton Conference, January 5-7, 2016. New Orleans, LA.

Luitel, K., D. Hudson, T. Knight. "Evaluating Impact of Actual Production History-Yield Exclusion (APH-YE) on Cotton Producers Using Simulation Method." Proceedings of the Beltwide Cotton Conference. January 5-7, 2016. New Orleans, LA.

Luitel, K., D. Hudson, T. Knight. "Impact of Agricultural Act of 2014 on Cotton Producers." Proceedings of Southern Agricultural Economics Association. February 6-9, 2016. San Antonio, TX.

March, R., C. Lyford, C.E. Carpio, and T. Boonsaeng. "Do SNAP Recipients Get the Best Prices?" Proceedings of the American Agricultural Economics Association Annual Meetings, July 31-August 2, 2016. Boston, MA.

Mitchell, D., D. Hudson, R. Williams, and P. Johnson. "The Impact of Climate Change on Cotton Production in Uzbekistan." Proceedings of the 2015 Beltwide Cotton Conference, January 5-7, 2015. San Antonio, TX.

Mitchell, Donna, Ryan Williams and Phillip Johnson. "An Economic Analysis to Determine the Feasibility of Groundwater Supplementation from the Dockum Aquifer," Southern Agricultural Economics Association Conference, February 6-9, 2016. San Antonio, TX. <http://purl.umn.edu/230069>.

Murova, Olga. "Current U.S. Policies for Rural Development. Modern Development Trends of Science and Technology, part II. City of Belgorod: Agency of Scientific Research. November 2015.

Paudel, K., B. Pokhrel, and E. Segarra. 2016. "Factors Affecting the Choice of Irrigation Technologies by U.S. Cotton Producers." Proceedings of the Challenges of Natural Resource Economics and Policy 5th National Forum on Socioeconomic Research in Coastal Systems. Sponsored by the Center for Natural Resource Economics and Policy, Louisiana State University Agricultural Center, March 20-22, 2016. New Orleans, Louisiana.

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

Sandoval, L. and C.E. Carpio. "Food Demand and Food Security in El Salvador." Proceedings of the Southern Agricultural Economics Association Conference, February 6-9, 2016. San Antonio, TX.

Tewari, R., K. Lange, A.M. Countryman, B. Guerrero, and J. Mehlhorn. "Enhancing Teaching Effectiveness in Agribusiness through Student Engagement." Organized Symposium, Western Agricultural Economics Association Meetings. June 23, 2016. Victoria, British Columbia, Canada.

Wang, H. and J. Malaga. "Potential Scenarios for China's Future Grain Sorghum Excess Demand." Selected paper presented at the American Agricultural Economics Association Annual Meetings. August 2016. [http://ageconsearch.umn.edu/bitstream/235946/2/Potential Scenarios for China Future Grain Sorghum Excess Demand_AAEEA_submit.pdf](http://ageconsearch.umn.edu/bitstream/235946/2/Potential%20Scenarios%20for%20China%20Future%20Grain%20Sorghum%20Excess%20Demand_AAEEA_submit.pdf).

Wang, H. and J. Malaga. "What Would be the Corn and Sorghum Price Gap Allowing China to Continue Importing Sorghum? 2016 Meetings Southern Agricultural Economics Association. San Antonio, TX. February 2016. [http://ageconsearch.umn.edu/bitstream/229887/2/ What would be the Corn and Sorghum Price Gap allowing China to Continue Importing Sorghum_saea.pdf](http://ageconsearch.umn.edu/bitstream/229887/2/What%20would%20be%20the%20Corn%20and%20Sorghum%20Price%20Gap%20allowing%20China%20to%20Continue%20Importing%20Sorghum_saea.pdf)

Zapata, S.D. and C.E. Carpio. "Non-Parametric Estimation of a Distribution Function with Interval Censored Data." Proceedings of the Southern Agricultural Economics Association Conference, February 6-9, 2016, San Antonio, TX.

ABSTRACTS

Dhakai, C., M. N. Parajulee, K. Lange, and E. Segarra. 2016. "Economics of Decision-Making on Cotton Flea-hopper Management in Texas High Plains Cotton." Poster selected for presentation at the 2016 Southwestern Branch Meeting of the Entomological Society of America held in Tyler, Texas, February 22-25, 2016.

Paudel, K., B. Pokhrel, and E. Segarra. "Factors Affecting the Choice of Irrigation Technologies by U.S. Cotton Producers." Abstract in Journal of Agricultural and Applied Economics, in press.

Selected for presentation at the annual meeting of the Southern Agricultural Economics Association, February 6-9, 2016. San Antonio, Texas.

Zivkovic, S., D. Hudson, P. Johnson, J. Park. "A Study in Attitude Shaping Cooperative Leadership." Southern Agricultural Economics Association Meetings, February 6-9, 2016. San Antonio, TX.

OTHER PUBLICATIONS & PROFESSIONAL ACTIVITIES

Hudson, D. Facilitator. United Cotton Growers Annual Board of Directors Strategic Planning Session Meeting, Ft. Worth, TX, August 2016.

Hudson, D. Facilitator. Brownfield Farmers' Cooperative Strategic Planning, Monthly, November 2015-August 2016.

THESES AND DISSERTATIONS

Bian, Dacheng. "Factors Affecting Groundwater Depletion in the Ogallala Aquifer: An Application to the Texas High Plains." Dissertation. Chair: Eduardo Segarra. August 2015.

Knisley, Shelbi. "Analysis of China's Impact on Australia's Grain Sorghum Export Market." Thesis. Co-chairs: Darren Hudson and Tom Knight. August 2015.

Zivkovic, Sanja. "The Impact of the Relationship Between Managers and the Board of Directors on Financial Performance of Agricultural Cooperatives." Dissertation. Chair: Darren Hudson. August 2015.

Gillum, Miranda. "Analysis of the Effects of Sustainability on Profitability for Operations in the Southern High Plains of Texas." Thesis. Chair: Phillip Johnson. December 2015.

Stokes, Kelsey. "The Economic Feasibility of an Equine Sports Therapy Facility." Thesis. Chair: Phillip Johnson. December 2015.

Aboohamidi, Abbas. "Essays on the Financial Crisis of 2007-2009: Analysis of Wealth, Saving Motives, and Financial Advice." Dissertation. Chair: Darren Hudson. May 2016.

DeSilva, K.V. Nirodha. "Essays on Water Scarcity: Non-market Valuation and Climate Change Impacts". Dissertation. Chair: Chenggang Wang. May 2016.

Dogruer, Turker. "The Demand Analysis of Vegetable Oils, Biofuel, Sugar Cane, and Ethanol in Europe, Brazil and the U.S." Thesis. Chair: Darren Hudson. May 2016.

Luitel, Kishor. "Essays on Crop Insurance Choices in the Agricultural Act of 2014 for Cotton Farmers." Dissertation. Chair: Darren Hudson. May 2016.

Redford, Audrey. "'High Hopes' and 'Bad Bundles': The Political Economy of U.S. Drug Control Policy." Dissertation. Chair: Adam Martin. May 2016.

Dhakal, Chandra. "Cotton Yield Response and Dynamic Optimization of Nitrogen in the Texas High Plains." Thesis. Co-chairs: Kelly Lange and Megha Parjulee. August 2016.

Gao, Yang. "Cap and Trade Market for Groundwater: Efficiency and Distributional Effects of the Permit Allocation Mechanism." Thesis. Chair: Ryan Williams. August 2016.

Goodman, Karsten. "Should Alternatives to Publicly Funded Policing be Considered? Evidence from the Development and Consolidation of Cattlemen's Associations in Texas." Thesis. Chair: Adam Martin. August 2016.

Roberson, Michael. "Price Elasticity for Smartphones in the United States: Results from Three Methodological Approaches." Dissertation. Chair: Ryan Williams. August 2016.

Shiroya, Michael. "Fully Endogenous Data Decomposition: An Application to Residential Housing Markets." Dissertation. Chair: Michael Farmer. August 2016.

Appendix D

PRESENTATIONS THAT WERE NOT
PUBLISHED IN ANY OUTLET

2015/16

Aborisade, O., C.E. Carpio, L. Mathews, 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 paper at the Southern Agricultural Economics Association annual meetings, February 6-9, 2016, San Antonio, TX.

Alfaro, E. and C.E. Carpio. The Minimum Cost of a Nutritious Diet in El Salvador. Selected poster presented at the Texas Tech University Undergraduate Research Conference, March 29-31, 2016, Lubbock, TX.

Antwi, Kwaku and Conrad Lyford. Socioeconomic Determinants of Food Access among Rural Households in Northern Ghana. Texas Tech Fifteenth Annual Graduate School Poster Competition Award (Runner-Up), Lubbock, TX, March 25, 2016.

Birur, D.K., A.K. Chapagain, S. Devadoss, and K. Paudel. Impact of China's Biofuel Policies on Land Use, Water Use, and GHGs Emissions. Presented at the Allied Social Science Associations, January 3-5, 2016, San Francisco, CA.

Bologna, Jamie. The Economics of Corruption. Presented at Penn State Behrend Black School of Business Economics and Liberty Lecture Series, April 22, 2016, Erie, PA.

Bologna, Jamie. Does Corruption Impact the Formal-Informal Sector Income Gap? Evidence from Brazil. Invited lecture at the Association of Private Enterprise Education Conference, April 3-5, 2016, Las Vegas, NV.

Bologna, Jamie. Political Influence over the Federal Prosecution of Public Corruption: Evidence from Individual Case Files. Presented at George Mason University Mercatus Center Dissertation Fellow Invited Lecture, March 8, 2016, Arlington, VA.

Bologna, Jamie. The Effect of Informal Employment and Corruption on Income Levels in Brazil. Presentation at University of Puget Sound Department of Economics, January 29, 2016, Tacoma, WA.

Bologna, Jamie. The Effect of Informal Employment and Corruption on Income Levels in Brazil. Presentation at Rochester Institute of Technology Department of Economics, January 26, 2016, Rochester, NY.

Bologna, Jamie. The Effect of Informal Employment and Corruption on Income Levels in Brazil. Presentation at University of Louisville Department of Economics, January 25, 2016, Louisville, KY.

Bologna, Jamie. The Effect of Informal Employment and Corruption on Income Levels in Brazil. Presentation at University of Evansville Schroeder School of Business, January 19, 2016, Evansville, IN.

Bologna, Jamie. The Effect of Informal Employment and Corruption on Income Levels in Brazil. Presentation at Berry College Department of Economics, January 11, 2016, Mount Berry, GA.

Bologna, Jamie. The Effect of Informal Employment and Corruption on Income Levels in Brazil. Presented at West Virginia University Department of Economics, December 5, 2015, Morgantown, WV.

Bologna, Jamie. Political Influence over the Federal Prosecution of Public Corruption: Evidence from Individual Case Files. Presented at Southern Agricultural Economics Association annual meetings, November 10, 2015, New Orleans, LA.

Bologna, Jamie. The Economics of Corruption. Invited presentation at Saint Vincent College Alex G. McKenna School of Business, Economics, and Government, November 10, 2015, Latrobe, PA.

Bologna, Jamie. Corruption, Product Market Competition, and Institutional Quality: Empirical Evidence from the U.S. States. Presented at Western Economic Association International meetings, June 29-July 2, 2015, Honolulu, HI.

Boonsaeng, T. and C.E. Carpio. Data Collection and Food Demand System Estimation Using Cross Sectional Data. Selected paper at the Southern Agricultural Economics Association annual meetings, February 6-9, 2016, San Antonio, TX.

Brashears, M., M. Miller, S. Trojan, J. Sarturi, C. Carpio and T. Brashears. Turning By-products to Beef: Sustaining the Cattle Industry in Honduras. Presentation to the 69th American Meat Science Reciprocal Meat Conference, June 19-22, 2016, San Angelo, TX.

Carpio, C.E. and T. Boonsaeng. The Effect of the Supplemental Nutrition Assistance Program (SNAP) on Food and Nonfood Spending Among Low-Income Households. Final project presentation to United States Department of Agriculture – Economic Research Services personnel, August 18, 2016, Washington, DC.

Carpio, C.E. and K. Lange. Current Status and Perspectives of E-Commerce in the Food Marketing System. Track session presentation (AEM Section) at the Agricultural and Applied Economics Association conference, July 31- August 2, 2016, Boston, MA.

Devadoss, Stephen and Jeff Luckstead. A Dynamic General Equilibrium Analysis of Immigration Policies and Agricultural Labor Markets. USDA – NIFA AFRI Project Directors Workshop, Economics, Markets, and Trade, August 3, 2016, Boston, MA.

Hudson, D. Food Security, Opportunity Cost, and Conflict. Invited presentation to the Social Sciences Department Seminar Series, United State Military Academy, September 11, 2016, West Point, NY.

Hudson, D. The Outlook for Crops. Presentation at the Texas Alliance for Water Conservation Field Day, September 16, 2016, Muncy, TX.

Hudson, D. Federal Priorities in Agricultural Economics. Presentation at the Southwest Council of Agribusiness Annual Meeting, October 13, 2015, Lubbock, TX.

Hudson, D. The Outlook for Cotton. Presentation at the Bankers Agricultural Credit Conference, November 13, 2015, Lubbock, TX.

Hudson, D. and B. Liu. The Preliminary Global Baseline for Cotton: 2016-2024. Presentation to the U.S. Department of Agriculture, December 15, 2015, Washington, DC.

Hudson, D. Agricultural Market Outlook. Presentation to the Perryton Equity Exchange Strategic Planning Session, January 13, 2016, Amarillo, TX.

Hudson, D. The Outlook for Agriculture in a Changing Environment. Presentation to the Delta Agriculture Exposition, January 20, 2016, Cleveland, MS.

Hudson, D. Strategic Planning in Management. Presentation to the Texas Agricultural Cooperative Council Director Development Conference, February 1, 2016, Amarillo, TX.

Hudson, D. The STAX Program and Insurance for Cotton. Presentation to the Texas AgriLife Extension Master Marketer Program, February 5, 2016, Abilene, TX.

Hudson, D. and B. Liu. The Global Baseline for Cotton: 2016-2024. Presentation to the U.S. House Committee on Agriculture and Senate Committee on Agriculture, Forestry, and Nutrition, March 10, 2016, Washington, DC.

Hudson, D. The Macroeconomic Outlook for Agriculture. Presentation to the Texas Agricultural Cooperative Council Annual Meeting, March 14, 2016, San Antonio, TX.

Hudson, D. The Macroeconomic Outlook for Agriculture. Presentation to the Farmers' Cooperative Compress Executive Board Annual Meeting, March 28, 2016, Lubbock, TX.

Johnson, Phillip. Is Winter Coming? Presentation made Federal Home Loan Bank of Dallas 2016 Lubbock Shareholders Meeting, June 14, 2016.

Lange, K. Family Farm Organization and Intergenerational Continuity. Presentation made at the West Texas Women's CPA Association, May 19, 2016. Lubbock, TX.

Luckstead, Jeff, and Stephen Devadoss. Implication of 2014 Farm Policies for Wheat Production. Presented at the American Agricultural and Applied Economics Association annual meeting, August 2, 2016, Boston, MA.

Luckstead, J., M. Dhamodharan, and S. Devadoss. Imperfect Competition, Trade Policies, and Technological Changes in the Orange Juice Market. Presented at the Southern Agricultural Economics Association annual meetings, February 6-9, 2016, San Antonio, TX.

Luckstead, J. and S. Devadoss. Size Distribution of Indian Cities. Presented at the 12th Conference of the Western Economic Association International, January 7-10, 2016, Singapore.

Luckstead, J. and S. Devadoss. Implications of Transatlantic Trade and Investment Partnership for Food Processing Sector. Presented at the Allied Social Science Associations, January 3-5, 2016, San Francisco, CA.

Lyford, Conrad, Carlos Carpio, Tullaya Boonsaeng, and Raymond March. Do SNAP Recipient Get the Best Prices? Understanding SNAP and Food Security among Low-Income Households (A FoodAPS Research Initiative), Presented to the USDA - Economic Research Service, October 22-23, 2015, Washington, DC.

Malaga, Jaime. Latin American Competition for the U.S. Fruit and Vegetable Markets: Trends, Cases and Lessons Learned. Presentation at the American Agricultural and Applied Economics Association annual meetings, July 31 – August 2, 2016, Boston, MA.

March, R., C. Lyford, C. Carpio and T. Boonsaeng. Do SNAP Recipients Get the Best Prices? Selected paper at the American Agricultural and Applied Economics Association annual meetings, July 31 – August 2, 2016, Boston, MA.

Martin Adam, Glenn Furton. Beyond Market Failure and Government Failure. Presentation at the Association of Private Enterprise Education Annual Meetings, April 3-5, 2016, Las Vegas, NV.

Martin, Adam. Institutional Mismatch in Private and Public Governance (panel). Presented at the Southern Agricultural Economics Association Conference, February 6-9, 2016, San Antonio, TX.

Mitchell, Donna and J. Pate. Profitability of 2 and 2 Production Systems. Poster presentation at Beltwide Cotton Conference, January 5-7, 2016, New Orleans, LA.

Mitchell, Donna and John Robinson. Structural Changes in U.S. Cotton Supply, Presented at the Beltwide Cotton Conference, January 5-7, 2016, New Orleans, LA.

Mitchell, Donna and John Robinson. Structural Changes in U.S. Cotton Supply, Presented at the Southern Agricultural Economics Association Conference, February 6-9, 2016, San Antonio, TX.

Nakakeeto, G. and B. Chidmi. An Almost Ideal Demand Estimation for Seafood in Texas. Selected paper at the Southern Agricultural Economics Association annual meetings, February 6-9, 2016, San Antonio, TX.

Rahman, Shaikh M. Costs of Electricity Generation by Power Projects under the Clean Development Mechanism. Presentation at the 2014 Conference of the Association for Economic and Development Studies in Bangladesh (AEDSB), December 23, 2015, Dhaka, Bangladesh.

Sandoval, L. and C.E. Carpio. Policy Implications of Two Food Security Measurement Methodologies in Guatemala. Track session presentation (Latin American Section) at the American Agricultural Economics Association, July 31 – August 2, 2016, Boston, MA.

Segarra, Eduardo. 2016. Social Welfare Implications of the Revised Gisser-Sanchez Paradox: Optimizing Underground Water Management. Invited presentation to the Facultad de Economia, Universidad Autonoma de Nuevo Leon, May 27, 2016. Monterrey, Mexico.

Segarra, Eduardo. 2016. Socio-Economic Indicators Addressing Environmental, Ecological and Sustainability Issues in Agriculture. Invited presentation at the School of Arid Environment and Climate Change, Lanzhou University, August 1, 2016. Lanzhou, China.

Segarra, Eduardo. 2016. Socio-Economic Impacts Assessment and Evaluation Associated with Geo-Hazard Related Events. Invited discussion at the School of Arid Environment and Climate Change, Lanzhou University, August 4, 2016. Tanshui, China.

Wang, Chenggang. Property Rights, Scale Economies, and Grassland Degradation. Invited speech at the Conference of Natural Resource Management and Public Policy, College of Public Administration, Huazhong Agricultural University, Wuhan, China. December 12, 2015.

Wang, Chenggang. Externalities in Environmental and Resource Economics. Invited lecture, College of Earth Environmental Sciences, Lanzhou University, Lanzhou, China. January 11, 2016.

Wang, Chenggang. Externalities in Environmental and Resource Economics. Invited lecture, School of Economics, Fujian Normal University, Fujian, China. March 9, 2016.

Williams, R.B., A. Benson, B. Bain, and M. Dicks. Factors Affecting Student Loan Debt Accrued by Graduates of U.S. Veterinary Medical Colleges. Selected paper prepared for presentation at the Southern Agricultural Economics Association 2016 Annual Meeting, San Antonio, TX, February 6-9, 2016. <http://purl.umn.edu/229834>.

Williams, Ryan B. Cap and Trade Markets for Groundwater: Efficiency and Distributional Effects of the Permit Allocation Mechanism. Invited presentation at the Ogallala Aquifer Program Workshop, Amarillo, TX, March 2016.

Williams, Ryan B. Impacts of Agricultural Productivity Enhancements and Time Value of Money on Groundwater Extraction. Attended poster of Ogallala Aquifer Program Workshop, Amarillo, TX, March 2016.

Williams, Ryan B. Water Economics. Campus presentation at Sultan Qaboos Cultural Center SQCC/International Center for Arid & Semiarid Land Studies (ICASALS) Agriculture in Arid Lands, Lubbock, TX, November 2015.

Williams, Ryan B. Factors Affecting Student Loan Debt for Students of Veterinary Medicine. Invited presentation at the American Veterinary Medical Association Economic Summit, Rosemont, IL, October 2015.

Zivkovic, S., D. Hudson, P. Johnson, J. Park. The Impact of the Relationship Between Managers and the Board of Directors on Financial Performance of Agricultural Cooperatives. Paper presented at the NCERA-210, November 11, 2015, Minneapolis, MN.

Appendix E

RESEARCH ADVISORY COMMITTEE AGENDA

2015/16

Agenda for AAEC Research Advisory Committee Meeting November 14, 2016

- 8:00 a.m. Convene in AAEC Conference Room (Ag. Sci. 302)
- 8:15-8:45 Study Abroad and International Programs
Dr. Carlos Carpio and Dr. Jaime Malaga
- 8:45-9:15 International Center for Agricultural Competitiveness
Dr. Darren Hudson
- 9:15-9:30 Break
- 9:30-10:00 Free Market Institute
Drs. Eduardo Segarra, Adam Martin and Jamie Bolonga Pavlik
- 10:00-10:30 Water Economics Research Update & TAWC activities
Drs. Donna Mitchell McCallister and Ryan Williams
- 10:30- 11:15 Meet with students, research staff working on research projects (Ag. Sci. 302)
- 11:15-11:30 Break
- 11:00-12:00 Brief Review of Past Year's Activities
Dr. Phillip Johnson
- Noon Lunch, Student Union, Lubbock Room, Advisory Committee, PI's, Dean's Office, Mark Wallace – NRM (invited), Eric Bernard– LA (invited), Michael Orth – AFS (invited), Scott Burris – AEC (invited), and Eric Hequet – PSS (invited)
- 1:15 p.m. Reconvene in AAEC Conference Room (Ag. Sci. 302). Executive committee meeting - AAEC Research Advisory Committee (excluding department and college representatives).
- 2:00 p.m. Recommendations, etc., provided to the department; faculty encouraged to attend.
- 2:30 p.m. Adjourn

Appendix F

ADVISORY COMMITTEE MEMBERS

2015/16

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

Mr. Tommy Engleke
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1210 San Antonio, Suite 101
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(Term expires 2016/17)

Mr. Marc Adams
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Dr. Jaroy Moore
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Dr. John Robinson
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(Term expires 2017/18)

Mr. Jason Coleman
High Plains Water District
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(Term expires 2016/17)

Mr. Clint Cryer
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(Term expires 2016/17)

Ms. Shelly Nutt
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(Term expires 2015/16)

Dr. Justin Weinheimer
Sorghum Checkoff
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(Term expires 2017/18)

Mr. Tim Lust
National Grain Sorghum Producers
4205 N. I 27
Lubbock, TX 79403
(806) 749-3478
tim@sorghumgrowers.com
(Term expires 2018/19)

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

Appendix G

THORNTON INSTITUTE ACTIVITIES

2015/16

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

NOVEMBER 4, 2016

- 7:30 - 8:30 a.m. **Registration**
- 8:00 - 8:05 **General Session**
Presiding: Mr. Chuck Senter
President
Bankers Agricultural Credit Conference
- 8:05 - 9:00 **Legal and Regulatory Update**
Mr. John Heasley
General Counsel
Texas Bankers Association
Austin
- 9:00 - 9:30 **Agricultural Outlook for Cotton 2017**
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
- 9:30 - 10:00 **Agricultural Outlook for Cattle 2017**
Mr. Ross Wilson
President and CEO
Texas Cattle Feeders Association
Amarillo
- 10:00 - 10:30 **Break**
- 10:30 - 11:30 **Economic Outlook**
Dr. Jeff Mercer
Senior Associate Dean
I. Wylie and Elizabeth Briscoe Chair in Finance
Director, Institute for Banking and Financial Studies – Finance
Rawls College of Business
Texas Tech University
Lubbock

11:30

Lunch

Hall of Nations
Luncheon Speaker
Mr. Jodey Arrington
Candidate for Texas District 19
U.S. House of Representatives
Lubbock

Presentation of the 2016 Distinguished Banking Service Award

1:30 - 2:30

Is Winter Coming?

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

2:30 - 3:00

Agricultural Outlook for Grains 2017

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

3:00

Adjourn

BANKERS AGRICULTURAL CREDIT CONFERENCE
OFFICERS AND DIRECTORS
2016

President:

Mr. Chuck Senter

Area President
First Bank and Trust
Tahoka

Directors:

Mr. Chad Currington

Senior Vice President
City Bank
Lubbock

Mr. Rick Boyd

Executive Vice President
Regional Manager
First United Bank
Lubbock

Mr. Tim Cooper

President
First State Bank
Spearman

Mr. Clint Cryer

Senior Vice President
Ag Lending Manager
PlainsCapital Bank
Lubbock

Mr. Brady Yeary

President - Perryton
FirstBank Southwest
Perryton