

## **VITA**

**Michael C. Farmer, Associate Professor**  
**Department of Agricultural and Applied Economics**  
**& Natural Resource Management**  
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### **EDUCATION:**

- 1980. B.S. Xavier University.** History.  
**1982 M.S. Ohio State University.** Agricultural Economics.  
**1993 Ph.D. Ohio State University.** Agricultural Economics.

### **PROFESSIONAL EXPERIENCE:**

- 1990–1993 Assistant Principal Investigator. Ohio State University.  
1993–1995 Visiting Associate Professor. National Agricultural University of Norway.  
1995–2003 Assistant Professor. Georgia Institute of Technology.  
2003–2005 Research Associate. Center for Paper Business and Industry Studies.  
2005–present Associate Professor. Texas Tech University

### **INTERNATIONAL EXPERIENCE:**

- 1993-1995. Visiting Associate Professor. National Agricultural University of Norway.

### **MEMBERSHIP IN PROFESSIONAL AND HONORARY SOCIETIES:**

#### Professional

1. American Economics Association; 1992–2001.
2. American Association of Resource and Environmental Economists; 1993–2005.
3. American Agricultural Economics Association; 1990-1996. 2005-present.

Honorary

1. Gamma Sigma Delta. 2006-present.

**HONORS AND AWARDS:**

1. 2004. Faculty Alumni Service Award. Georgia Institute of Technology Alumni Association.

**AREA OF EXPERTISE:** Natural Resource Economics

**PATENTS:**

1. (*notice of intent only*). Farmer, M.C., Maxwell, Timothy. 2009. A multi-unit fully mobile pyrolysis system for bio-energy generation from biomass residuals.

**PUBLICATIONS:**

**Book Chapters: total published 6**

Farmer, M.C. 1994. "Economic Principles of Natural Resource Management and On-Farm Applications," in Rumstad, Sigurd, ed. *Introduction to Farm Economics and Natural Resource Management* (Translation from Norwegian). Norwegian Academic Press.

Randall, A., Farmer, M.C. 1995. "Benefits, Costs and the Safe Minimum Standard of Conservation," in *The Handbook of Environmental Economics*. ed. Daniel Bromley. Blackwell Handbooks in Economics. Cambridge, MA. p. 26-44.

Farmer, M.C., Randall, A. 2006. "Making Value Compromises in an Efficient Economy: Efficiency as value dialogue." in *Forestry and Environmental Change: socioeconomic and political dimensions..* ed. Innes, J., Hickey, G., Hoehn, H. CABI, Ney York, NY: with International Union of Forest Research Organizations. 31-52.

Farmer, M.C., Lipscomb, C. 2006. "The Role of Economic Analysis in the Design and Evaluation of Healthy Communities and Regions," in *Regional Economics: Social and Economic Processes*. Ed. Shevliakova, E. Toglatti University Press. P. 326-40.

Liu, Xiaolan, Michael Farmer, and Sergio Capareda. 2011. "The economic feasibility of electricity generation from biomass on the South Plains of Texas," in *The Economics of Alternative Energy Sources and Globalization*. Eds. Schmitz, Andrew, Norbert Wilson, Charles Moss, and David Zilberman. Sharjah, United Arab Emirates: Bentham Science Publishers.

Powell, R., Farmer, M.C., Perry, G., Henderson, R.W., Latenberg, R and Echternacht. 2011. "Non-native Amphibians and Reptiles in the Greater Caribbean: patterns of arrival

and resulting distributions.” In *Conservation of Caribbean Island Herpetofaunas. Volume I*. Ed. Adrian Hailey. Kluwer Press. 1-127.

**Refereed Journals: total published 29**

Morse, G. and Farmer, M.C. 1986 “Location Effects of a Tax Abatement Program,” **National Tax Journal**. 39.2 p.229. 1986.

Farmer, M.C., Randall, A. 1997. “Policies for Sustainability: Lessons from an Overlapping Generations Model,” **Land Economics**. 73.4. November 1997.

Kingsley, G., Farmer, M.C. 1997. “Using Technology Absorption as an evaluation criterion: Case Studies from a State Research and Development Program,” **Policy Studies Journal**. 25.3. Fall, 1997.

Farmer, M.C., Randall, A. 1998. “The Rationality of the Safe Minimum Standard,” **Land Economics**. 74.3. August 1998.\

Berrens, B. McKee, M. and Farmer, M.C. 1999 “Implementing the SMS: Case management studies from the southwest,” **Ecological Economics**, December, 1999. 30. 461-474.

Farmer, M.C. 2001 “Getting the SMS to work in the real world: A Hydrologic Model as a Case Study in Moral Pragmatism.” **Ecological Economics**. 38. 209-26.

Farmer, M.C., Kingsley, G. 2001 “Locating Critical Components of Human Capital in the Rural Environment,” **Policy Studies Journal**. 29.2

Farmer, M.C. 2003 “Re-Investing in the Built City: A Spatial Networks Approach.” **European Planning Studies**. 11.1. January, 2003. 57-76.

McMahon, G., Farmer, M.C. 2004 “Reallocation of Federal Multipurpose Reservoirs: Principles, Policy, and Practice,” **Water Resources Planning and Management - American Society of Civil Engineers Journal**. 130.3. 187-197.’

Farmer, M.C. 2005. “Environmental Consequences of Social Security Reform: A Second Best Threat to Public Conservation,” **Ecological Economics**. 53. 191-209.

Farmer, M.C., Lipscomb, C., McCarthy, P. May, 2005. “How Alcohol-Related Crashes of Different Severity Interrelate and Respond to Local Spatial Characteristics: An Evaluation of a Common Site Sales Ban on Alcohol and Gasoline,” **Annals of Regional Science**. 39.1 185-201.

Farmer, M.C., Lipscomb, C. 2006. “Household Diversity and Market Segmentation within a Single Neighborhood,” **Annals of Regional Science**. 23.4 1-18.

Ortega-Ochoa, C., Farmer, M.C., Villalobos, C. 2007. "A Pasture-Based Model for Extended Drought Management, Long-Term Sustainability, and Economic Viability in the Southern High Plains" **Plant Management Network**. Nov. 2007.

Farmer, M.C., Sinquefield, S. 2007. "The Status of Black Liquor Gasification Technology: Paths and Obstacles to Commercialization." **PIRA International: Industry Studies**. IntertechPira. Surrey, U.K. July, 2007.

Farmer, M.C., Lipscomb, C. 2008. "Evidence of Conservative Dichotomous Choice Responses in the Active Policy Setting" **Environmental and Resource Economics**. 39.3. 223-46.

McMahon, G., Farmer, M.C. 2009. "Rule-Based Storage Accounting for Multipurpose Reservoirs" **Water Resources Policy & Management - American Society of Civil Engineers Journal**. 135.4. July 1, 2009.

Farmer, M.C. and Lipscomb, C. 2010. "Using Quantile Regression in Hedonic Analysis to Reveal Hedonic Submarket Competition" **Journal of Real Estate Research**. 43 3. 385-400.

Wilde, C., J. Johnson, M. Farmer. 2010. Inventory of Cotton Gin Trash on the Texas High Plains and Bio-Energy Feedstock Potentials. **The Texas Journal of Agriculture and Natural Resource** 23:42-49.

Farmer, M.C., Belasco, E. 2011. "A Finite Mixture Model of Heterogeneous Anchoring with Distinct Anchoring Patterns" **Applied Economics Letters**. 18.2. 137-141.

Ross, J., Farmer, M.C., Lipscomb, C. 2011. "Inconsistency in Welfare Inferences from Distance Variables in Hedonic Regressions" **The Journal of Real Estate Finance and Economics**. 32.4. 435-460

Farmer, M.C., Perry, G. 2011. "Reducing the risk of biological invasion: Creating incentives for pet sellers and owners to do the right thing" **Journal of Herpetology**. 45.1. 134-141.

Benson, A., Zhu, P., Farmer, MC, Villalobos, C. 2011. "Profitability of a Dryland Grazing System Suitable for the Texas High Plains." **Texas Journal of Agriculture and Natural Resource**. 24:62-73.

Farmer, M.C. and Shiroya, M.S. 2012. "Using Housing Market Information to Improve Evaluation of Physical Activity." **International Journal of Exercise Science** 6.2: 32.

Belasco, E., Farmer, M.C., Lipscomb, C. 2012. "Using a Finite Mixture Model of Heterogeneous Households to Delineate Housing Submarkets." **Journal of Real Estate Research**. 34:4. 577-594.

Liu, X., Farmer, M., & Capareda, S. 2012. "Supply variation of agricultural residues and its effects on regional bioenergy development." **AgBioForum**, 15.3: 315-327.

Ramesh, R., K. Griffis-Kyle, G. Perry, and M. Farmer. 2012. "Urban amphibians of the Texas Panhandle: Baseline inventory and habitat associations in a drought year." **Reptiles & Amphibians** 19.4: 243–253.

Farmer, M.C., Wallace, M., and Shiroya, M. 2012. "Bird Diversity indicates ecological value in home prices." **Urban Ecosystems**. 16.3. 131-144.

Farmer, M.C. 2013. "Setting up an Ethics of Ecosystem Research Structure from the Precautionary Principle" **ILAR Journal**. 54.1:58-62.

Farmer, MC, Benson, A., Liu, X., Capareda, S., Middleton, M. 2013. "Feasibility of an Adaptable Biorefinery Platform: Addressing the Delivery Scale Dilemma under Drought Risk." *Journal of Agricultural and Applied Economics*. 45.4: 1–15.

## **Other Publications and Conference Papers**

### **PROCEEDINGS: Reviewed**

#### **VOLUNTEERED: (7 years) 19**

Farmer, M.C. 2006 "Forgotten Efficiency: How to Revitalize Corps of Engineers Planning Functions Using Planning Rules to Build Federal Water Infra-structure to Reallocate Priorities." USACOE Planners Conference. San Francisco, CA.

Ortega-Ocha, Carlos, and Farmer, M.C. 2006. "Water Reduction Using WW-B.Dahl Pastures to Produce Beef: Potential to Relieve Aquifer Irrigation and Sustain More Intensive Agriculture for Diverse Western Rangeland Conditions. Universities Council on Water Resources. Annual Conference (Increasing Freshwater Supplies). Santa Fe, NM.

Farmer, M.C. 2006. "Adding Efficiency and Reducing Conflict in Reallocation Decisions of Federal Reservoirs Using Existing Rules: Some Insights from Economic Bargaining Theory," Universities Council on Water Resources. Annual Conference (Increasing Freshwater Supplies). Santa Fe, NM. .

Farmer, M.C. 2007. "Failure To Plan or Planning Failure?," Universities Council on Water Resources. 2007 Annual Conference (Managing Hazards). Boise, Idaho.

Farmer, M.C. 2007. "Hazards of R&D and Adoption Delays from Water Policy Infrastructure," Universities Council on Water Resources. 2007 Annual Conference (Managing Hazards). Boise, Idaho.

Farmer, M.C. and McMahon, G. 2009. "Rule-Based Storage Accounting for Multipurpose Reservoirs: Impediments to Conflict Resolution" Universities Council on Water Resources 2008 Annual Conference. Chicago, IL.

Farmer, M.C. and Lipscomb, C. 2009. Using Quantile Regression to Reveal Hedonic Submarket Competition. 48th Annual Meeting of the Southern Regional Science Association. April, 2009. San Antonio, TX.

Liu, X. Farmer, M.C., Capareda, S. 2009. "The Economic Feasibility of Generating Bio-energy from Biomass for Peak Demand of Electricity in the South Plains of Texas." Economics of Alternative Energy Sources & Globalization, Orland, FL., November 15-17, 2009

Farmer, M.C., Wallace, M., and Shiroya, M. 2010. Bird Diversity indicates ecological value in home prices." Emerging Issues 3: Along Urban/Rural Interfaces: Urban Ecology: Wildlife Society of America and USDA Forest Service (Sponsors). April 14, 2010.

Farmer, M.C., Lipscomb, C., Belasco, E. 2010. "Urban Heterogeneity in Preferences a Planner can handle: A Finite Mixture Model of Heterogeneity in a single Urban Neighborhood." Southern Regional Science Association (SRSA). Alexandria, VA. March 18, 2010.

Farmer, M.C., Ross, J., Lipscomb, C. 2010. "Inconsistency in Welfare Inferences from Distance Variables in Hedonic Regressions" Southern Regional Science Association (SRSA). Alexandria, VA. March 18, 2010.

Farmer, M.C. Shiroya, M. "Submarket Diversity in a Seemingly Homogeneous Region." American Association of Economics and Finance, Jacksonville FL. Feb 4, 2010.

Farmer, MC and Belasco, E. (Session Organizers): Spatial Econometrics in Agricultural Economics. Participants: J. LeSage, D. Lacombe, E. Belasco, MC Farmer. Southern Agricultural Economics Association. New Orleans, LA Feb 5 2011.

Shiroya, M. Farmer, M.C. and Belasco, E. 2011. "A Finite Mixture Approach for Household Residential Choices." Southern Regional Science Association (SRSA). New Orleans, LA. February 27, 2011.

Farmer, MC, Shiroya, MS, Ross, J. 2012. "The Inconsistency of Distance variables in Hedonic Price Analysis: Empirical Example of a Fixed Point Correction." Southern Regional Science Association (SRSA). Charleston, SC. February 27, 2012.

Lipscomb, A, Farmer, MC, Kilpatrick, JA. 2012. Willingness to Pay Convergence Between Contingent Valuation and Hedonic Methods. American Real Estate Society, St Pete Beach, FL April 30, 2012.

Farmer, MC. 2012. "Joint Water Supply, Environmental and Economic Uncertainty." UCWR. Santa Fe, NM. July 18, 2012.

Farmer, MC, Benson, A, McMahon, G. 2012. "A Case Study in Multi-Objective Water Management." National Water Resource Association. Western Water Seminar. Sun Valley, Idaho. August 2, 2012.

Farmer, M.C., Shiroya, M.S. 2012. "Using Real Estate Markets to Improve Regional Evaluation of Physical Activity and Diet." Texas Obesity Research Center Conference: Time for a Transcultural, Transdisciplinary, Transformational Approach to End Obesity. November 5-6, 2012. Texas Obesity Research Center (TORC). Houston, TX. November 6, 2012.

Tangouri, A. and Farmer, MC. "Emerging Non-Stationarity in Energy and Agricultural Commodity Prices since 2006" American Association of Economics and Finance, Jacksonville Fl. Feb 16, 2013.

#### **ABSTRACTS: (6 years) 2**

Benson, A, and Farmer, M.C. 2009. "Nonrenewable Aquifer Depletion and the Transition to Dryland Agriculture" Western Agricultural Economics Association. Kauai, HI. July 9, 2009.

Liu, X. Farmer, M.C., 2010. "Economic Aspects of Renewable energy Generation from Agricultural Waste on the Southern Plains of Texas." Agricultural and Applied Economics Association. Denver, CO. July 24, 2010.

**BOOK REVIEWS** *Costs and Challenges of local Urban Services: Evidence from India's Cities.* 2009. Sridhar, K.S. and Mathur, O.P Oxford University Press: New Delhi. 263 p. : Reviewed By Farmer. 2010. **The Review of Regional Studies.** 40:3. 237-44.

#### **PRESENTATIONS AND LECTURES: (7 years) 20**

Farmer, M.C. 2006. "Adaptable Biorefinery: Understanding Federal Agricultural Policy Structures to Commercialize Value-Added Energy Products at US Pulp Mills." 2006 TAPPI Technical Conference. October, 2006. Atlanta, Georgia.

Farmer, M.C. 2007. "A Cooperative Game Model for Reallocation of Multi-Purpose Federal Reservoirs." Inaugural speaker in Southwest Water Resources Speaker Series; Texas A&M. Dept. of Agricultural Economics.

Farmer, M.C. 2008. "Optimal Depletion of the Ogallala Aquifer: The Economics of Depletion and Research Priorities" Cotton Economics Research Institute. 8<sup>th</sup> Annual Research and Extension Symposium. April, 2008. Lubbock, TX

Farmer, M.C. and Perry, G. 2008. "Reducing the risk of herpetological invasion: creating incentives for private owners to do the right thing." Texas Herpetological Society. Austin, TX.

Farmer, M.C. 2008. "Long Run International Water Supply Infrastructure: Competing Objectives among Food, Water and Energy Policy." CIFAL International Water Forum, Climate Change and Variability – An UNCTAD Affiliated agency. Washington, D.C.. June, 2008.

Farmer, M.C. 2008. "Strategic Design of Low Input Neighborhoods that Yield Higher Home Values." Green Business Works Expo. Southface Energy Institute, USGBC & Metro Atlanta Chamber of Commerce. Atlanta, GA. September, 2008.

Farmer, M.C. 2008. "Portability of the Cellulosic Ethanol Infrastructure to Other Regions: Confronting Indirect and Long Run Land Use Changes." DOE/USDA Sustainability of Biofuels Workshop: A Report to the Secretaries. Beltsville, MD. October, 2008.

Farmer, M.C. 2008. "Infrastructure Commitments for Biofuels in Emerging Economies: the Water-Energy nexus in China and India" Social Dimensions of Biofuels. Sloan Foundation. Univ. of Illinois. Champaign, Ill. November, 2008.

Farmer, M.C. 2009. "Potential Carbon Trading Within Agriculture and Between Agriculture and Other Industries" Cotton Economics Research Institute. 9<sup>th</sup> Annual Research and Extension Symposium. April, 2009. Lubbock, TX

Farmer, M.C. 2009. "Understanding the Structure of Carbon Trading Markets: Key Concerns for Producers and Cooperatives" Texas Association of Agricultural Cooperatives. Galveston, TX. March, 2009

Farmer, M.C. 2009. "Understanding Cap and Trade: Opportunities for Agriculture." Southwest Agriculture Council. Annual Meeting. Lubbock, TX.

Farmer, M.C. 2009. "Opportunities for Peaking Power Energy using mobile gasification and pyrolysis." College Station, TX. Dept. of Agricultural Engineering. Annual Review Sun Grant- Skid-Mounted Gasification

Farmer, M.C. 2010. Cap & Trade Update: Which Opportunities Make Sense. TAWC Field Day. Muncy, TX. February 3, 2010



Adaptable Biorefinery on the South Plains. 8/28/2010. Combined meeting of United Cotton Growers Board and Panhandle Agricultural Producers Membership. Amarillo, TX.

**Public Consortium; Lubbock, TX.** “Lubbock Urban Systems: Linking Water, Natural Resources, Real Estate and Public health.” September 19, 2011 ICC.

**Graduate Student Committees: Completed as Chair. Seven.**

#### **PhD Students. Four**

**Cliff Lipscomb. 2003.** Resolving the Market Segmentation Problem in Hedonic Price Analysis. School of Public Policy. Defense 8/15/03. Georgia Institute of Technology.

**Miaomiao Wang. 2009.** A Dynamic Social Network Approach to the Identification of Productive Research Partnerships: The Case of Black Liquor Gasification. Department of Agricultural and Applied Economics. Defense 10/27/09. Texas Tech University.

**Xiaolan Liu. 2010** The Economic Feasibility of Generating Bio-energy from Biomass on the South Plains of Texas. Department of Agricultural and Applied Economics. Defense 5/28/10. Texas Tech University.

**Principe, Jonathan. 2012.** Optimal Depletion of Non-renewing Aquifers for Irrigated Agriculture Under Technological Uncertainty: Research Priorities for Viable Dryland Options. Defense 3/8/12. Texas Tech University.

#### **MS Students. Three**

**Steven Burke. 2004.** “A cellular Automata Model to assess research partnerships using social network theory.” School of Public Policy. Defense 5/04. Georgia Institute of Technology.

**Michael Shiroya. 2010.** “A Finite Mixture Approach for Household Residential Choices.” Department of Agricultural and Applied Economics. Defense 10/28/10. Texas Tech University.

**Walker, Michael. 2012.** “.” .” Department of Agricultural and Applied Economics. Defense 02/29/12. Texas Tech University.

**Chair: in progress (total of 4)**

**Tangaoui, Abbes**, Ph.D. Department of Agricultural Economics. graduation 12/12.  
Candidacy targeted April, 2012. Progressing to benchmarks.

**Michael Shiroya**, Ph.D. Department of Agricultural Economics. graduation 12/13.  
Candidacy targeted October, 2012. Progressing to benchmarks.

### **Graduate Student Committee Completed: Four**

#### **Three MS**

**Ping Shu**. MS (Benson). 2010. Simulated profitability of Dryland Rangeland considering simulated long run drought sequences. Defense 4/14/10. Texas Tech University

**Rasika Ramesh**. 2012. "Conditions for Playa Management for Anuran Species in Urban West Texas." Natural Resources Management. Texas Tech University.

**Timmer, Jessica**. 2012. "Motivations and Ecological Knowledge of Volunteers at Animal Rehabilitation Centers in Texas." Natural Resources Management. Texas Tech University.

#### **Four PhD.**

**Joshua Reiss**. 2001. 2<sup>n</sup> Advisor. School of Physics. New Tools to Evaluate Stochastic Time Series: non-linear dynamic tools. Defense, 7/24/01. Georgia Institute of Technology.

**George McMahon**. 2001. 2<sup>nd</sup> Advisor. School of Civil Engineering. Marginalization of Federal Hydro-Power. Defense, 6/13/01. Georgia Institute of Technology.

**Sheldon Gen**. 2004. 2<sup>nd</sup> Advisor. School of Public Policy. Stability of Non-Market Value Methods for the Environment: A Meta-Analysis Approach. Defense, 7/29/04. School of Public Policy. Georgia Institute of Technology.

**Sam Whitehead**. 2012. Geography Stake-holder Planning for Alternative Futures on the Texas High Plains. Defense April 18, 2012. Texas Tech University

#### **On Committee: in progress (total of 4)**

Juliet Kervliet (PhD, 2<sup>nd</sup> year – TIEH)

Mamatha Kakarla (PhD, 1st year – PSS)  
Matt Sellers (PhD, 2nd year – AFS)  
Janni Chen (PhD, 2<sup>nd</sup> year – NRM)

**UNDERGRADUATE ADVISING:**

1. 19 students (varies).

**TEACHING RESPONSIBILITIES:**

<b>Student Teaching Evaluations Dr. Michael C. Farmer</b>					
<b>Term/Class</b>	<b>Number of Students</b>	<b>Instructor Overall Question#1</b>	<b>Availability Question #2</b>	<b>Treated all Fairly Question #4</b>	<b>Overall Learning Experience#11</b>
<b>Fall 2012</b>					
AAEC 4309	22	4.6	4.6	4.67	4.62
<b>Spring 2012</b>					
AAEC 4313	27	4.0	3.58	3.86	3.93
<b>Fall 2011</b>					
AAEC 2305	42	4.24	4.31	4.5	4.19
<b>Fall 2011</b>					
AAEC 4309	20	4.30	4.15	4.45	4.0
					<b>Presented Clearly Question #7</b>
<b>Spring 2011</b>					
AAEC 4313	46	4.37	4.21	4.47	4.24
<b>Fall 2010</b>					
AAEC 4309	18	4.92	4.69	4.85	4.77
<b>Spring 2010</b>					
AAEC 4313	46	4.37	4.21	4.47	4.24
<b>Fall 2009</b>					
AAEC 4309*	18	4.92	4.69	4.85	4.77
<b>Spring 2009</b>					
AAEC 4313	44	4.85	4.70	4.81	4.65
AAEC 4301	24	No Evaluation	No Evaluation	No Evaluation	No Evaluation
<b>Fall 2008</b>					
AAEC 4309	20	5.00	4.88	5.00	4.88
AAEC 6301	7	No Evaluation	No Evaluation	No Evaluation	No Evaluation
<b>Spring 2008</b>					
AAEC 4313	50	4.61	4.55	4.65	4.55
<b>Fall 2007</b>					
AAEC 4309*	21	4.28*	4.22	4.44	3.72

<b>SU 1 2007</b>					
AAEC 2305	16	No Evaluation	No Evaluation	No Evaluation	No Evaluation
<b>Spring 2007</b>					
AAEC 4313*	43	4.71*	4.60	4.68	4.52
AAEC 6301*	4	No Evaluation	No Evaluation	No Evaluation	No Evaluation
<b>Fall 2006</b>					
AAEC 2305	36	3.50	3.94	4.06	3.59
<b>SU 1 2006</b>					
AAEC 2305	11	No Evaluation	No Evaluation	No Evaluation	No Evaluation
<b>Spring 2006</b>					
AAEC 2305	36	4.17	4.52	4.66	3.93
<b>Fall 2005</b>					
AAEC 2305*	<b>25</b>	3.63*	4.06	4.13	3.38

**\* First Time Teaching Course**

**See also peer-teaching review and comments: June, 2008.**

**See also peer-teaching review and comments: May, 2010.**

## **GRANTS AND CONTRACTS**

**Norwegian Research Council (NSF Equivalent).** 1994 - 1995. \$450K total. \$35,000 (Farmer). Economics and Ecology Project. Reviewer/Advisor for system-wide ecological risks in an intensive sectoral case study of soil use and conservation. **Co-PI**

**Norwegian Department of Natural Resources and Environmental Planning.** 1994 - 1995. \$10,000. Cultural Landscape Policy Management. Approaches to cultural landscape investigation. Considered compatibility of practices to an economic efficiency goal of policy - makers. **CO PI.**

**Programme for an Alternative Future.** 1993 - 1995. \$35,000. Subcontract on Compensating Investments to Norwegian Parliament. Evaluated Types of Investments Policy-Makers can consider to compensate for reductions in Oil Reserves. **PI**

**GaTech new researcher grant.** 1996-1997. \$15,000. Sponsor research into ecological-economic dynamics with the school of Physics. **PI**

**Sloan Foundation Grant.** 2001-2003. \$219,000. An Environmental-Economic Assessment of Black Liquor Gasification. July, 2002 to Nov, 2004 (annual reviews).

Environmental Impact Statement (yr1), Non-Market Value (yr2&3) and Community development assessment (yr2&3). **PI**

**Texas Department of Agriculture. 2006-2007.** \$109,500. (\$36,135). A Novel Method for Biological Control of Feral Hogs in Texas. **Co-PI**

**A Bio-Char Conversion Process. 2007-2008.** \$5,000. **Technology Research Assistance Consortium.** With T. Maxwell, M.E. Build a Bio-Char machine to test Chemical composition of agricultural residuals for bio-energy conversion. **PI**

**USDA Sun Grant: USDA-DOE. 2007-2010.** \$276,000. (\$45,000 TTU). Skid-Mounted On-Site Biomass Gasification. In collaboration with Texas A&M and LSU, Agr. Engineering. **Co-PI.**

**VP of Research competition (conference). 2009.** Urban Ecology and Planning. \$10,000 (\$4,000 Farmer) with Klein. **Co-PI**

**USDA-CRS. “Ogallala Initiative.” 2009-2010.** \$35,000 (\$23,636). Economically Optimal Transition to Dryland Production Systems on the Texas High Plains. with Aaron Benson (AECO) and Rick Zartman (PSS). **PI**

**USDA-CRS. “Ogallala Initiative.” 2010 – 2011.** \$40,000 (\$24,000) Improving Investment Potential in Dryland Agriculture: Predicting Joint Probability Distributions to Identify Risk Exposure of Key Coupled Weather Events. with Aaron Benson (AECO) and Rick Zartman (PSS). **PI**

**Cotton Incorporated. 2010** \$29,000. (\$14,500). The Carbon Footprint and Bio-fuel Possibilities for Texas Cotton II. with Darren Hudson. **Co-PI**

**ARS-USDA. 1/01/2010- 12/31/2011.** \$200,000. (\$9,996). Planning Grant. The Texas High Plains: A Candidate Site for Long-term Agroecosystems Research and Education. with Steve Maas, PSS. **Co-PI**

**Cotton Incorporated. 2010** \$25,000. (\$22,500). The Contract Conditions for an Adaptable Biorefinery. Footprint and Bio-fuel Possibilities for Texas Cotton III. with Darren Hudson. **Co-PI**

**US DA-Rural Development: 9/1/12-5/31/13.** \$62,300. Operations Research for an Adaptable Biorefinery: Optimal Value Steam Portfolio and Critical Equipment.

**USDA-CRS. “Ogallala Initiative.” 2013-2015.** \$65,000 (\$11,700). Evaluation of Sorghum prospects for Bio-fuels markets. With ARS Stress Lab

**USDA-CRS. “Ogallala Initiative.” 2013-2015.** \$34,300 (\$21,300). Conditions for Cropping Choice Switch in Castro County, TX. With ARS stress Lab.

**GRANTS IN KIND**

**1. APT Trailers. 2009-Present.** \$43,000. With Maxwell. Drying Trailer Donated to Test Biomass Drying Capacity to Support a Biorefinery. **PI.**

**Pending:**

**US DA-DOT: Sun Grant. 2011** \$158,000. Operations Research for an Adaptable Biorefinery. **PI**

**NSF. 2010.** \$637,500 (\$127,500 Farmer). Collaborative Research: Developing Regionally- and Sectorally-relevant High Resolution Climate Projections. with Hayhoe (TTU) and Ghosh (NC State). **Co-PI**

**NSF. 2010.** \$150,000 (\$12,000). Planning Grant. Enabling Science to Assist Stakeholders & Decision-makers in Managing Water Resources in a Changing World: An Integrated Approach. **Co-PI.**

**Rejected:**

<u>Agency</u>	<u>Year Submitted</u>	<u>Project Title</u>	<u>Amount Requested</u>	<u>Candidate Portion</u>
<u>USDA</u>	<u>2006</u>	Strategic Neighborhood Planning at the Urban-Rural Fringe	<u>\$485,985</u>	<u>\$316,540</u>
<u>ARP Texas</u>	<u>2006</u>	Setting Performance Standards for Mobile Bio-oil Technology	<u>\$87,500</u>	<u>\$50,000</u>
<u>USDOE</u>	<u>2006</u>	Flexible Co-Production of Power, Heat and Fuels from Biomass (TTU Portion)	<u>\$165,000</u>	<u>165,000</u>
<u>USDA</u>	<u>2007</u>	Strategic Neighborhood Design: Meeting Economic and Environ-mental Needs at the Urban-Rural Fringe	<u>\$593,465</u>	<u>\$356,079</u>
<u>TTU - VPR</u>	<u>2007</u>	A Center For Strategic Neighborhood Design	<u>\$487,000</u>	<u>\$315,000</u>
<u>USDOE</u>	<u>2008</u>	A Framework for Identifying Water Vulnerability and Adaptive Capacity for Energy Systems under Future Climate Change Scenarios	<u>\$94,785</u>	<u>\$56,780</u>
<u>USDA</u>	<u>2008</u>	Producer Crop Choice and land use Response to Watershed Management Policies	<u>577,132</u>	<u>\$259,000</u>
<u>NSF</u>	<u>2008</u>	Estimation of Coupled Ecological, Hydrologic, and Climatic Processes with	<u>\$988,390</u>	<u>\$790,712</u>

		Human Land Use and Crop Choices for an Adaptive Policy Design		
<b><u>USAID</u></b>	<b><u>2009</u></b>	An Integrated Approach to Building Human Capacity for Enhancing Food Security in Tigray Region of Northern Ethiopia	<b><u>\$49,700</u></b>	<b><u>\$6,958</u></b>
<b><u>USDA</u></b>	<b><u>2009</u></b>	Crop Choice and Land Use Response To Watershed Management Policies on the Dougherty Plain ....	<b><u>\$387,664</u></b>	<b><u>\$260,000</u></b>
<b><u>ARP-Texas</u></b>	<b><u>2009</u></b>	Operations research and Production Design for Bio-Energy	<b><u>\$105,000</u></b>	<b><u>\$63,000</u></b>
<b><u>NSF</u></b>	<b><u>2009</u></b>	Public Discourse, Policy Choices and Sustainable Ecology in Mid-sized Cities of Middle America	<b><u>\$291,102</u></b>	<b><u>\$101,885</u></b>
<b><u>USDA</u></b>	<b><u>2009</u></b>	Semi-arid Rangelands in Drought: Linking Invasive Species and Community Dynamics to Ecological Resilience	<b><u>\$435,991</u></b>	<b><u>\$113,357</u></b>
<b><u>USDA</u></b>	<b><u>2010</u></b>	Enhancing Forest Cover in the Southeast through Long Run Land Use Change Management (TTU Portion)	<b><u>\$590,595</u></b>	<b><u>\$265,000</u></b>

### **SERVICE TO PROFESSIONAL ORGANIZATIONS**

**Syllabi Review University of Uganda. 1993 - 2008.** MS in Agr Econ. Department. Review Syllabi and suggest readings Accessible electronically for a program of 400 students and 8 professors.

**Coordinated School of Public Policy Lecture Series for 1995 — 1997.** Solicited 11 presentations by professionals outside GaTech to speak to School faculty.

**Co-Coordinator: 1997** Conference on Environmental Valuation, Joint meeting of American W-133 seminar (sponsored by USDA) and European Environmental and Resource Economics Association. Coordinated reviews and groupings of Presentations. (modest role, @ 4 working days). With Dr. Olvar Bergland, NLH.

**Refugee Re-Settlement: University Job placement for refugee Atlanta, 1997 -2000.** 19 placements, three now enrolled as Ga Tech students.

**Regional Water Managers Atlanta: 1998-present.** advisor to regional water managers in nine area counties regarding In-state Water Compact. Value of Municipal Water supply security, environmental and regional economic stress of new water regimes (NED report 2002). Re-evaluate USCOE procedures as they entertain the largest water reallocation in their history.



**Review Board DOE: October, 2002 — July, 2003;** “A Cost-benefit Analysis of Black Liquor Gasification in the Southeast United States” prepared for Department of Energy, Renewable Energy Division / Research Priorities.

**Co-Chair: June, 2003-07 plenary session; USCE (EWRI) Task Committee on** Reallocation of Federal Reservoirs: program length 2003-2007.

**ASCE (American Society of Civil Engineers). 7/1/2005-6/31/2007.** *priority updating* of US Corps of Engineer’s Civil Water Works Division. First Economist Invited to direct a Two Year Topical Panel. Ended summer 2007.

Final Report leading to a manuscript in draft for submission to ASCE by 2/04/08 to JASCE–Water. (see McMahon, G., Farmer, M.C. 2009)

**Water Conservation Council. 09/2006 – present.** *Lubbock Chamber Of Commerce.* Committee (sub-committee of Ag Committee). Meets Monthly. This is a very active group and is a critical partner in the Strategic Neighborhood Design. Runs and Directs Water-Wise Program with Master Gardners; Presents Industry Awards for Stylistic Xeriscaping by Chamber Companies

**USDA NRI Review Panel. 2007.** Sustainable Agriculture Initiative.

**Oklahoma Water Policy Network:** panel reviewer. **2007.**

**South Plains Food Bank: 2007-present.** small farm works with at-risk high school students: recruiting, research and ‘extension-style’ opportunities. Runs and manages small farm. Coordinates TTU volunteers from CASNR twice per year (Spring and Fall); coordinated three Mech.Engr. senior group design projects to manage specific water management, or construction for operational efficiency.

**USDA-DOE: National Strategic Plan Report. 2009-2010.** “US Bio-fuels Production: An Assessment of Opportunities and Challenges from US Biofuels Production. A Report to the Secretaries.” Report in March, 2010 from Conference in Beltsville, MD. November, 2009. Authored and Directed section “Implications for Integrated Water Use Planning.”

## **REVIEWS:**

<b>Journal:</b>	<b>Number of Reviews (since 1995)</b>	
Land Economics	7	
Journal of Environmental Economics and Management	7	
American Journal of Agricultural Economics	4	
Ecological Economics	29	1*
Journal of Contemporary Economics	4	

Journal of Development of Resource Economics	3	
Journal of Health Promotion	29	2
Social Science Quarterly	1	
Applied Economics	1	1
Biodiversity and Conservation	1	1
Journal of herpetology	1	1

**Book Reviews:**

The Review of Regional Studies	1	1
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\*Since Jan. 2011

Generally 1 review every 9 weeks during 10 month school year - last 3 years.

**ON CAMPUS CONTRIBUTIONS**

**A. UNIVERSITY:**

- 1 **TTU Press Editorial Committee.** CASNR representative, 9/2006- present.  
Chair: Dr. J. Brink 2006-2009; Hartmeister, 2009-present. Review manuscripts, contact authors, negotiate conditions and present recommendations to faculty committee. Five Books (just over one per year). Attend committee reviews of all books.
- 2 **Faculty Senate:** 09/2009 – 2011. **Senate Secretary (09/2010-05/2011).**
- 3 **TTU Graduate School. Committee Chair.**

*Review of the Doctoral Program of the Department of Chemistry and Biochemistry of Texas Tech University (TTU) February, 2009.*

**B. COLLEGE - CASNR:**

- 1 **Recruitment and Retention Committee.** 9/2007-8/31/2010.
- 2 **CASNR Water Center.** 9/2005-present.

**C. DEPARTMENT - AECO:**

- 1 **Graduate Studies Committee.** 1/2006-present. Chair: Dr. T. Knight
  - Among On-Going Duties, Designed Graduate Degree Assessment Worksheets
- 2 **Three Faculty Search Committees:** 2007. Chair(s): Dr. Sam Mohanty, Dr. Dave Willis, Dr. Malaga.

- 3 **Graduate Examination Committee:** 2006, 2007. Grader and Examiner.  
Chair: Dr. Sam Mohanty.
- 4 **Graduate Examination Committee:** Grader only, 2008-2010.
- 5 **Student Awards Committee.** 2006-2007. Chair: Dr. P. Johnson.
- 6 **Draft Editor and Facilitator for Strategic Plan** 2006 “Department of Agricultural and Applied Economics Strategic Plan for the Future”

#### **D. STUDENT ORGANIZATION ADVISING:**

- **AECO Graduate Student Association:** Newly (re)formed.  
Advisor, inception 01/2010 – present.
- **AECO Club (department);** 2007-2010.  
Advisor, 9/08 to 8/31/10.  
Co-advisor, 9/07 – 8/08.
- **AGR fraternity (college);** 2007-present. advisor.
- **Tech Habitat (university);** 2007-present. Built five houses.

#### **COMMUNITY:**

**South Plains Food Bank.** 2007-present. G.R.U.B. Program for at-risk high school students: recruiting, research and ‘extension-style’ opportunities. Runs and manages small farm. Coordinates TTU volunteers from CASNR.

**Chamber of Commerce.** 2005 – present. Water resource Sub-committee of Agricultural Committee. Links to long run integration of agricultural and municipal water use planning to sustain economic development in the long run.

#### **INDUSTRY:**

**Plains Agricultural Producers:** 2009 – present. Private Collaborators to develop a research platform using bio-mass as a fuel to apply or facilitate Texas Tech University apply for development grants from Department of Energy (DOE), Department of Defense (DOD), United States Department of Agriculture (USDA), and any other agencies that are desirable

**APT Trailers:** 2007-present. Advising Conversion of peanut drying trailer to biomass pre-processing transport to biorefinery locations in smaller distributed systems.

**OTHER: Georgia Tech School of Public Policy.**

**Coordinator. Bachelor of Science in Public Policy Program. 9/01 — 12/02.**

Coordinator during first two years of BS degree offering. Enrollment doubled and the number of student advisors from four in 00-01 to one in 01-02. Primary responsibility for 83 undergraduate majors, Advising in preparation for possible 5-year BSPP-MS program, Curriculum review and conducting first formal assessment of program for Oct, 2002.

**School of Public Policy Graduate Studies Committee: 4 yrs. 1996-2000.**

Served during 1st three years of PhD program, introduction of new MS curriculum and Subsequent semester conversion. During service PhD program launched and MS program revised.

**Curriculum Committees:** The School of Public Policy inaugurated five separate degree programs (including a re-writing of the existing MS degree) from 1996 - 2003. Member of each curriculum committee for each program as the lone economist for all but one year.

**School of Public Policy Doctoral Comprehensive Examination Committee: 5 examination offerings.** (when not on committee, submits and reviews questions each time).

**Chair: School of Public Policy Doctoral Specialty Examination Committee: Environmental Specialty. Spring, 2000.**

**School of Public Policy Undergraduate Programs Committee: 3 yrs. (1997 - 1999: 2001 - 2002).**

**Press Conference: Environmental Research at GaTech. 1998.** Campus-Wide press conference on environmental policy. 13 newspapers Represented. A day long press conference with representatives from 4 Institute Colleges, including showcasing of our Institute for Sustainable Technology and Development.