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Abstracts of Selected Papers

NAREA Annual Meetings, Burlington, Vermont, June 7–10, 2009

SESSION: *Agricultural Land Preservation*. Moderator: Kathleen Bell (University of Maine)

“Local Development Pressure and Land Use Decisions: Farmland Change within Diversified Agricultural Networks.” Jessica Hyman and Will Sawyer (Center for Rural Studies, University of Vermont).

A survey of farmers in targeted agricultural groups shows relationships between development pressure and farmers’ plans to buy or sell land, particularly farmers who comprise the majority of the state’s agricultural sector. The study then identifies areas facing farmland change and the land use and planning implications of those changes.

“A Hedonic Model of Agricultural Land Impacts on Residential Land Values: Evidence from Delaware.” Allison Borchers and Joshua Duke (University of Delaware).

This paper looks at the extent agricultural land amenities are capitalized. Data are drawn from residential housing surrounding a very large, attractive farm in New Castle County, Delaware. A hedonic model estimates the impact of proximity to this farm as well as other agricultural land.

“Informing Farmland Preservation When Primary Research Is Unavailable: Does Common Practice Reduce the Validity and Relevance of Benefit Transfer?” Robert Johnston (Clark University) and Joshua Duke (University of Delaware).

This article provides evidence regarding the capacity of benefit transfer to inform farmland preservation efforts. We focus on the validity of common transfer practices applied by practitioners in the absence of more concrete guidance. Results suggest that common transfer assumptions are sometimes appropriate, but may also detract from validity and applicability.

“Understanding Factors Contributing to the Appreciation of Preserved Farmland.” Brian Schilling, Kevin Sullivan, and Lucas Marxen (Rutgers University).

This paper examines trends in preserved farmland values in New Jersey and identifies factors contributing to the rapid appreciation of deed-restricted farmland. The empirical model incorporates agricultural productivity factors and metrics of the consumptive value of preserved farmland which spur non-agricultural residential demand, thus increasing competition for deed-restricted land.

SESSION: *Measuring Willingness to Pay*. Moderator: Heather Klemick (U.S. Environmental Protection Agency)

“Does Consumer Willingness to Pay Change Over Time in Response to Food Scares?” Robin Dillaway and Kent Messer (University of Delaware), Harry Kaiser (Cornell University), and John Bernard (University of Delaware).

Results from a non-student sample involved in multiple experimental sessions over time show that willingness to pay (WTP) for leading-brand chicken decreases for up to two months upon learning of negative safety information from a reliable source. In contrast, WTP for a relatively safe brand increases initially, but decays quickly with time.

“Comparing Multiple-Bounded Discrete Choice Approach with Stochastic Payment Card and Open-Ended Approaches: Results from a Survey of Willingness to Pay for Air Quality Improvement in Beijing.” Zhi Li (Peking University, China, and University of Rhode Island).

This paper proves the consistency between multiple-bounded discrete choice (MBDC) and stochastic payment card (SPC) approaches in concept, deduces and tests by empirical data the statistical equivalence of the models estimated from MBDC and SPC, compares the open-ended approach with MBDC, and estimates people’s willingness to pay for air quality improvement in Beijing.

“Consumers’ Willingness to Pay for Organic Ethnic Specialty Produce on the U.S. East Coast.” Ramu Govindasamy (Rutgers Univer-

city), Anoma Ariyawardana (University of Peradeniya), and Venkata Puduri (Rutgers University).

This paper presents an ordered logit approach in modeling the willingness to pay for organic ethnic produce on the East Coast of the United States. The model is applied to a total sample of 1,084 respondents from four ethnic groups—namely, Chinese, Asian Indians, Mexicans, and Puerto Ricans—by using a telephone survey.

“How Much Are Tourists Willing to Pay for Beach Amenities? Evidence from a Choice Modeling Experiment in Barbados.” James Casey (Washington and Lee University) and Peter Schuhmann (University of North Carolina, Wilmington).

We develop a choice experiment in an attempt to elicit tourists’ maximum willingness to pay (WTP) for an array of beach amenities. Initial results suggest that there is a high WTP for beach width and cleanliness. There is also a significant WTP for accommodations being very close to the beach, which may have implications for coastal protection policy.

SESSION: Dairy. Moderator: David Just (Cornell University)

“Human Resource Management on Dairy Farms: Is it Profitable to Invest in People?” Jeffrey Hyde, Sarah Roth, and Lisa Holden (The Pennsylvania State University).

Increasing farm size results in increasing farm labor usage. We explored whether the adoption of human resource management practices significantly impacted farm profitability. This was accomplished using data envelopment analysis. Results suggest that only the use of job descriptions for full-time employees significantly impacted farm efficiency.

“Information Asymmetry, Product Labeling, and Price Premiums: The Case of Labeling for rBST-free Fluid Milk.” Lan Li, Harry Kaiser, and Edward McLaughlin (Cornell University) and Diansheng Dong (Economic Research Service, USDA).

This paper examines the retail price premium for fluid milk with rBST labels and investigates the extent to which the premium is based on costs

or is a charge for information or due to price discrimination. The findings suggest that retailers/processors were able to seize excess margins for milk with rBST-free labels.

“Long-Term Profitability of New England Organic Dairy Farms: A Four-Year Analysis.” Robert Parsons and Qingbin Wang (University of Vermont).

A four-year study of New England organic dairy farms finds a growing profitable sector. Despite less production and smaller herds, organic dairies were more profitable than their conventional neighbors in 3 of 4 years. Over 70 percent of the organic farmers believed they would not be in business today if not for the organic option.

“Altering Milk Components Produced by the Dairy Cow: Estimation by a Multiple Output Distance Function.” Loren Tauer, Jaesung Cho, and Masato Nakane (Cornell University).

The effects of inputs on the four decomposed milk outputs of fluid milk, butterfat, protein, and other solids were estimated via an output distance function using data from New York dairy farms. Purchased feed has the most significant impact on all outputs, followed by livestock expenditures, farm-grown feed, real estate, and labor.

SESSION: Labels and Trade. Moderator: Carolyn Dimitri (Economic Research Service, USDA)

“Japanese Willingness to Pay for Agricultural Products with the U.S.A. Label: A Choice-Based Conjoint Analysis for Pork.” John Bernard and Haiyan Jiang (University of Delaware) and Hikaru Hanawa Peterson and John Fox (Kansas State University).

Country-of-origin labeling in Japan could have profound effects on the competitiveness of U.S. exports. Japanese consumers were surveyed to assess their willingness to pay (WTP) for pork with the U.S.A. label. Results showed that country of origin was more important than price, with U.S. pork having a lower WTP than Japanese pork.

“COOL Effects on U.S. Shrimp Trade.” Siny Joseph, Nathalie Lavoie, and Julie Caswell (University of Massachusetts, Amherst).

The growth of cheaper imports of shrimp and partial coverage of COOL imply that countries ex-

porting shrimp to the United States may have an incentive to change their product composition, i.e., potential diversion of frozen shrimp into processed shrimp. Through a combination of theoretical and empirical models, we show that product mix changes post COOL implementation.

“Are Labels Helpful Tools to Identify Typical Foods? A Survey of Italian Consumers.” Riccardo Vecchio (University of Naples, Parthenope).

The study analyzes the capability of Italian consumers to recognize and distinguish the food products protected by the European Union’s denomination of origin trademark (PDO) through the information provided on the label. The results will give insights to policymakers and marketers on consumers’ knowledge and response to geographical indications.

“The Effects of Currency Movement on Wheat Trade of the United States and China.” Miaomiao Wang and Shiliang Zhao (Texas Tech University).

Using a partial equilibrium model, this paper explores the effect of exchange rate on the growth of wheat trade between the United States and China. Simulation results show that RMB (renminbi, China’s official currency) appreciation under different scenarios is likely to increase U.S. exports, domestic prices, and trade welfare in the wheat market.

SESSION: *Spatial Analysis*. Moderator: Jill Caviglia-Harris (Salisbury University)

“Agriculture and the Environment: A Spatial and Economic Analysis.” Kornelia Dabrowska and Fred Hitzhusen (The Ohio State University).

Economic modeling combined with Geographic Information Systems mapping is an effective way of analyzing the impact of animal agriculture on local communities. Separate hedonic models are developed for several Ohio counties. Due to the interdependence that is often exhibited by data with a spatial component, spatial econometrics techniques are applied.

“A Spatial-Dynamic Model of the Economics of Groundwater Contamination.” Yusuke Ku-

wayama and Nicholas Brozovic (University of Illinois at Urbana-Champaign).

This paper develops a spatial-dynamic optimization model of groundwater contamination, with a focus on the implications of contaminant dispersion on emissions policy. The model is calibrated to data from the Chicago metropolitan region in order to assess the effectiveness of regulations to control contamination of drinking water supplies from the application of road salt.

“The Value of Land Use Patterns and Preservation Policies.” Martin Heintzelman (Clarkson University).

This paper uses a large data set on home sales in Massachusetts to investigate the effect on property values of (i) varying local land-use patterns and (ii) a statewide, but locally implemented, preservation policy, using spatial econometric methods to control for spatial dependence and spatial autocorrelation.

“Conservation of Species in Human-Altered Landscapes Using a Spatially Explicit, Dynamic Land Allocation Model.” Dana Bauer (Boston University).

Conversion of natural areas to land dominated by human use results in loss, degradation, and fragmentation of wildlife habitat. This paper presents a dynamic land allocation model that maximizes the net benefits of heterogeneous land conversion over time, while guaranteeing long-term species meta-population persistence across the landscape.

SESSION: *Organic and Local Foods*. Moderator: Cheryl Brown (West Virginia University)

“Competing over Quality: How Organic Is Organic Milk?” Carolyn Dimitri (Economic Research Service, USDA).

The organic regulation is essentially a minimum quality standard, and in the case of organic milk is less strict than the consumer perception of organic. We show that changing the regulation to reflect consumer preferences increases social welfare, makes low-quality firms better off, and makes high-quality firms worse off.

“Factors Affecting Integrated Pest Management Implementation in Northeast Region

Greenhouse Ornamentals.” Miguel Gomez and Bradley Rickard (Cornell University), Margaret Skinner (University of Vermont), and JoAnna Upton (Cornell University).

We surveyed ninety-three small growers of ornamentals in the Northeast region to identify factors that influence integrated pest management (IPM) adoption. We construct a variable describing the extent of IPM adoption and employ a Tobit model for estimation. Preliminary results show high variability of IPM adoption and identify market factors limiting IPM adoption.

“Determinants of Vendor Success in Farmers Markets: Evidence from Upstate New York.” Todd Schmit and Miguel Gomez (Cornell University).

Data were collected from 27 farmers markets in northern New York, targeting vendors, market managers, and customers. We offer an empirical model of vendors’ and farmers’ market performance, using objective and subjective measures, as a function of characteristics from these three market participants.

“Identifying and Measuring the Effect of Firm Clusters Among Certified Organic Processors and Handlers.” Edward Jaenicke (Penn State University), Stephan Goetz (Penn State University and the Northeast Regional Center for Rural Development), Ping-Chao Wu (Penn State University), and Carolyn Dimitri (Economic Research Service, USDA).

This paper identifies and measures impacts from firm clusters of certified organic handlers. We show that clusters can increase sales per employee by \$0.17 million to \$1.47 million, depending on whether a small or large number of firms is at the basis for a cluster’s definition.

SESSION: *Pollution Prevention and Waste Disposal*. Moderator: Donna Harrington (University of Vermont)

“Pilot-Testing Performance-Based Incentives for Agricultural Pollution Control in Iowa and Vermont.” Jonathan Winsten (Winrock International and the University of Vermont).

This USDA and NRCS Conservation Innovation Grant project is pilot-testing the use of performance-based incentives for reducing nonpoint

source pollution from agricultural lands in the Upper Mississippi River and Lake Champlain basins. Performance-based incentives reward farmers for achieving specified environmental outcomes and provide farmers flexibility and incentive to find the least costly way(s) to achieve the goals.

“The Influence of Municipal Facility Operational Characteristics on the Collection of Household Electronic Waste.” Rachel Bouvier and Travis Wagner (University of Southern Maine).

This study examines the influence of socio-economic factors on the drop-off rate of electronic waste for recycling. Data were collected representing 55 Maine municipalities in 2007. Results suggest that the collection rate is inelastic to the fee, but positively associated with the frequency with which the collection site is open.

“Does Pollution Prevention Reduce Toxic Emissions? A Dynamic Panel Data Model.” Donna Harrington (University of Vermont) and George Deltas and Madhu Khanna (University of Illinois at Urbana Champaign).

This paper investigates whether adoption of pollution prevention activities reduces toxic emissions, using Arellano and Bond¹ dynamic panel data models. We find that the negative effect of pollution prevention on toxic releases is weak and short-term. Its effectiveness is also limited to onsite toxic emissions and among high emitters.

“Solid Waste Management and Pay-as-You-Throw Policy in New Hampshire: Spatial Analysis.” Aliya Sassi, John Halstead, and Ju-Chin Huang (University of New Hampshire).

This paper examines spatial effects of pay-as-you-throw (PAYT) for 182 New Hampshire cities and towns in 2000. Preliminary findings indicate that a town’s PAYT adoption depends on its neighbors’ PAYT policy decisions. Our results also show no support for per capita waste increase as a result of PAYT policy implementation by a town’s neighbors.

¹ Arellano, M., and S. Bond. 1991. “Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment.” *Review of Economic Studies* 58(2): 277–297.

SESSION: Natural Resource Values. Moderator: Dan Lass (University of Massachusetts)

“Economic Analysis of the Availability of Soil Survey Information.” Archana Pradhan and Jerald Fletcher (West Virginia University).

This paper discusses the economic value of soil information provided by the National Cooperative Soil Survey. The benefit estimation procedures demonstrate an innovative approach for valuing information that supports benefit-cost analysis. Benefit estimates of such government programs facilitate program management and guide policy decisions for future developments and public investments.

“Temporal Stability of Recreation Choices.” Stela Stefanova and George Parsons (University of Delaware).

In this study we evaluate the stability of coefficient and willingness-to-pay estimates for recreation services over two time periods. To address this question, we estimate a random utility maximization model of recreation demand, using two datasets from different time periods, but concerning the same study area.

“Using Aggregate License Purchases to Estimate a Site Choice Model of Recreation Demand.” David Massey, Stephen Newbold, and Adam Daigneault (U.S. Environmental Protection Agency).

We estimate the relationship between site characteristics and seasonal license purchases using a modified random utility maximization model structure and data on purchases. We assume recreators compare the cost of a license with its expected seasonal utility. If expected seasonal utility, which is a function of site characteristics, exceeds the disutility of the license’s fee, recreators will purchase a license.

SESSION: Tropical Forests and Carbon. Moderator: Jonathan Winstein (University of Vermont)

“Valuing Tropical Forests and Competing Land Use: The Evolution of Land Markets in the Amazon Frontier.” Jill Caviglia-Harris (Salisbury University) and Erin Sills (North Carolina State University).

This paper applies hedonic analysis to derive the value of competing land uses in the Amazon frontier region of Rondônia, Brazil. Patterns in property values over a 15-year time period are combined with survey data. Results identify an increasing premium for forest cover that is higher than carbon annuity payments found in the literature.

“Accounting for Carbon in Models of Land Use and Implications for Payments for Environmental Services: An Application to Southern Mexico.” Jacqueline Geoghegan (Clark University), Deborah Lawrence (University of Virginia), and Laura Schneider (Rutgers University).

In this paper, we develop an econometric model to estimate the share of land in different land cover types. Using this estimated model, we develop scenarios of different potential future economic trajectories for the region and, using detailed *in situ* data on carbon stocks, calculate the potential impact on carbon stocks for the region.

“Estimating the Non-Market Value of Carbon Policies in a Computable General Equilibrium Framework: An Application to Regulatory Impact Analysis.” Brett Gelso, Eric Hurley, and Jennifer Li (Booz Allen Hamilton).

The objective of this paper is to estimate the non-market value of carbon policies in a Computable General Equilibrium framework. Our framework will provide policymakers a broad snapshot of the range of macroeconomic and environmental consequences of federal carbon regulation.

“Determinants of Secondary Forest Cover and Spatial Interactions in a Private Tenure Shifting Cultivation System.” Heather Klemick (U.S. Environmental Protection Agency, National Center for Environmental Economics).

This study examines forest fallow management among Brazilian shifting cultivators. A spatial econometric model indicates that fallowing is not determined by position in the watershed or upstream forest cover, despite local forest externalities. Rather, off-farm income, farm size, land ownership and market access, and access to transportation affect fallowing.

SESSION: Symposium. Moderator: Lori Lynch (University of Maryland)

“Serving the Needs of the Next Generation of Agricultural and Resource Economics Leaders.” Fen Hunt and Siva Sureshwaran (Cooperative State Research, Education, and Extension Service, USDA), Lori Lynch (University of Maryland), and Stephen Swallow (University of Rhode Island).

The symposium is a stakeholder input forum as the Cooperative State Research, Education, and Extension Service transitions to the National Institute for Food and Agriculture. The goal is to explore ways to partner with the next generation of agricultural economists and to improve routine contact with faculty, e.g., informing funding/presentation opportunities in Washington, D.C., short-term assignments, etc.

SESSION: Agricultural Production. Moderator: Farhed Shah (University of Connecticut)

“Influence of Diammonium Phosphate (DAP) Production Cost on DAP Price.” Wen-yuan Huang and Jayson Beckman (Economic Research Service, USDA).

This study uses co-integration analysis and an equilibrium error-correction model to investigate influence of volatility of diammonium phosphate (DAP) production cost on volatility of the producer’s DAP price. Contemporaneous (short-run) effect together with equilibrium (long-run) effect of the cost on the price will be discussed.

“Discrete-Choice Models of Demand for Business and Crop Insurance.” Edouard Mafoua-Koukebene (State University of New York).

This study investigates the effect of socioeconomic and demographic characteristics and farm attributes on farmers’ use of business and/or crop insurance as risk management strategies. Two logistic models are performed on the 2001 New Jersey survey data. Findings from this study are helpful to farmers and public policymakers while making decisions.

“Credit Cycles: Causal Evidence from Agriculture.” Barrett Kirwan (University of Maryland).

Kiyotaki and Moore (1997)² theorized that the dynamic interaction between credit limits and asset prices amplifies temporary technology shocks. Using a unique combination of nationally representative farm-level data, I test the implications of this theory. An exogenous change in cash flow provides the variation necessary to identify the credit limit-asset price interaction.

SESSION: Regional Development. Moderator: John Halstead (University of New Hampshire)

“Linking Retired Individuals’ Skills at the End of Broadband with Employer Needs: A Potential for Increased Rural Employment in New England?” Doug Morris, Lyndon Goodridge, and Alberto B. Manalo (University of New Hampshire).

Businesses and retirees in New England both showed an interest in meaningful part-time employment, 16 to 20 hours, either on-site or from home. Fifty-eight percent of individuals would like to work from home, while 74 percent of employers indicated that the work-at-home option was available, often computer-based.

“Population Dynamics: Drivers of the Young and Retiree Age Groups in the United States and Implications for Urban and Rural Economic Development.” Yohannes Hailu (Michigan State University) and Soji Adelaja and Majd Abdulla (Land Policy Institute, Michigan State University).

Movement of young and retiree age groups across regions is closely linked to economic development. By utilizing county-level data and a system of equations, the relationship between population dynamics and urban and rural economic development is tested. Results suggest significant relationships.

“Transferable Lessons in Marketing and Operation of Agri-Tourism: Comparison between Vermont and Massachusetts.” Chyi-lyi (Kathleen) Liang (University of Vermont) and Marlow Duffy (University of Vermont).

Agri-tourism farmers in Massachusetts and Vermont have revealed different experiences in op-

² Kiyotaki, N., and J. Moore. 1997. “Credit Cycles.” *Journal of Political Economy* 105(2): 211–248.

erations, marketing strategies, and impacts of agri-tourism on their personal/family life. Most of the survey respondents agreed that they were better off financially from agri-tourism. However, Vermont agri-tourism operators believed their agri-tourism operation had a more positive impact on their personal/family life than did Massachusetts farmers.

“Customizing the Definition of an Agricultural Industry for Policy Analysis: The Case of New Jersey Equine.” Paul Gottlieb, Kevin Sullivan, Karyn Malinowski, Brian Schilling, and Diana Urban-Brown (Rutgers University).

We report the results of an economic impact study of the New Jersey equine industry. A major challenge of the study was to capture buying and selling relationships within a diverse industry that includes not only livestock production, but also feed grown on non-equine facilities, and unique recreational and entertainment components.

SESSION: *Land and Water Use*. Moderator: Robert Johnston (Clark University)

“Assessment of Technical Efficiency for the Agriculture Sector in Egypt.” Ayman Abouzeid (University of Connecticut) and Farhed Shah (Connecticut University).

A stochastic production frontier approach is used to measure technical efficiency for the Egyptian agriculture sector and sub sectors. Analysis with aggregate-level panel data from 1985 to 2005 shows that technical efficiency in Egyptian agriculture production is lower than reported in the existing literature.

“Downstream Environmental Impacts of Reservoir Operations.” Yoon Lee (University of Connecticut), Ayman Abou-Zeid (Menoufia University), and Farhed Shah (University of Connecticut).

Large dams impact society in many ways. A model is developed to determine simultaneously optimal strategies for reservoir-level sediment control and downstream environmental management. Application to Lake Aswan indicates the need for policy coordination on water flow increases and sediment removal to increase the lifespan of the dam and improve downstream water quality.

“Civic Engagement and Land Use Policy Change: Does Social Capital Affect Ecosystem Service Flows?” John Halstead, Patricia Jarema, and Karen Conway (University of New Hampshire).

This paper focuses on the linkages between civic engagement and changes in ecosystem services (as proxied by land cover change). Research findings indicate a negative correlation between civic engagement and land cover changes seen in the Central Appalachian region. These findings have important implications for policy and regional economic development.

“External Validation of Contingent Valuation Using a Hypothetical Referendum: Comparing Willingness to Pay Estimates Between Voters and Non-Voters in Southern New Hampshire.” Daniel Deisenroth and Craig Bond (Colorado State University), Kelly Giraud Cullen (University of New Hampshire), and Greg Caporossi (University of New Hampshire).

This paper uses contingent valuation (CV) to measure the non-market value of open space in southern New Hampshire, something that had not previously been done. CV results are compared with actual referendum results in order to contribute to the validation of the CV methodology. Finally, voters and non-voters are compared in terms of their preferences for open space.

SESSION: *Agricultural Consumption*. Moderator: Edward Jaenicke (Pennsylvania State University)

“Impact of Agricultural Policy on Caloric Intake Levels for Specific Food Items.” Brad Rickard (Cornell University).

This research carefully examines the link between agricultural support and obesity using detailed data about policy measures, nutrient information, and consumers' purchasing patterns for food products. Results suggest that the total caloric response to changes in agricultural support is negative, non-trivial for some products, and decreasing over time.

“Effects of Pesticide Regulation on Quality-Adjusted Prices for Pesticides on Peaches, 1993–2007.” Richard Nehring (Economic Research Service, USDA), Elisabeth Newcomb

Sinha (University of Maryland), Jorge Fernandez-Cornejo (Economic Research Service, USDA), and Arthur Grube (U.S. Environmental Protection Agency).

Quality-adjusted price indices are calculated for pesticides used in peach production by state for 1993–2007 using hedonic methods, and the impact of regulations on key pesticides and peach yields are examined.

“Supermarket Price Competition: The Case of Yogurt Category in the Houston Metropolitan Area.” Madiha Zaffou and Benaissa Chidmi (Texas Tech University).

The objective of this paper is to investigate the pricing conduct of some supermarket chains in setting retail prices for yogurt products, through the estimation of the price-cost margins or the Lerner index. As a special case, we use the weekly sales data of yogurt and yogurt drinks in three supermarket chains in the Houston metropolitan area to estimate the developed model.

SESSION: *Biodiesel*. Moderator: Kathleen Liang (University of Vermont)

“The Effects of U.S. Biofuel Policies on the Energy Market: A Comparative Static Analysis.” C. Kim and Glenn Schaible (Economic Research Service, USDA) and Stan Daberkow (consultant).

The primary objective of our study is to derive equilibrium market prices for blended gasoline under various U.S. biofuel policies. To achieve this goal, we present an economic simulation model that simultaneously integrates distiller, refiner, and blender profit-maximization models, where blenders must choose between domestically produced ethanol and imported ethanol.

“A Real Options Analysis of Ethanol Plant Investment under Uncertainty.” Todd Schmit and Jianchuan Luo (Cornell University).

We analyze investment and operating decisions of ethanol facilities using a real options approach. The paper broadens previous work in this area by incorporating multiple sources of stochastic price behavior, alternative probabilities of future policy changes, alternative ethanol technologies from alternative feedstocks, and spatial differences in pricing behavior.

“Technical and Economic Feasibility of Oilseed and Biodiesel Production in the Northeast: Evidence from Vermont.” Qingbin Wang, Emily Stebbins, and Robert Parsons (University of Vermont).

This paper presents preliminary assessment results of the technical and economic feasibilities of producing soybeans, canola, and sunflowers, and using the beans and oilseeds to produce biodiesel and livestock meal based on farm trial data and a simulation model.

“Urban Influence on Costs of Production in the Corn Belt, and How Climate Change and the Ethanol Mandate Matter.” Richard Nehring (Economic Research Service, USDA), Charles Barnard (retired), and Vince Breneman, Ken Erickson, and Charles Hallahan (Economic Research Service, USDA).

This study uses stochastic production frontier procedures to estimate the impact of urban influence and the ethanol mandate on economic performance in the Corn Belt, conditioning the land input on urban influence and climate change via hedonic techniques.

SESSION: *Experimental Methods*. Moderator: Joshua Duke (University of Delaware)

“External Validity of Ambient-Based Pollution Control Experiments: A Comparison of Student Participants and Agriculture Professionals.” Jordan Suter (Oberlin College), Gregory Poe (Cornell University), and Christian Vossler (University of Tennessee).

Experimental research on pollution control instruments for nonpoint source pollution has proliferated in recent years. An important question is how findings from these laboratory test-beds can inform policy implementation. In this paper, we compare outcomes from ambient tax experiments conducted with undergraduate participants to those from dairy farmers.

“The Efficacy of Limited Information: Do Bid Maximums Reduce Procurement Costs in Asymmetric Auctions?” Daniel Hellerstein (Economic Research Service, USDA) and Nate Higgins (University of Maryland).

Conservation programs faced with limited budgets often use some form of competitive enroll-

ment mechanism. In this paper we use experimental methods to consider an auction mechanism that incorporates bid maximums and quality adjustments. We find that overly stringent maximums can increase overall expenditures, and that when quality of offers is important, substantial increases in offer maximums can yield a better quality-adjusted result.

“Can Context Effects Mitigate the Free-Riding Behavior That Causes Negative Externalities? An Experimental Investigation.” **Jubo Yan (University of Delaware), Jordan Suter (Oberlin College), and Kent Messer (University of Delaware).**

Most modern environmental and many other externality problems arise indirectly from people’s self-interested, benign behavior. We designed an (in-laboratory) experiment to test whether contextual factors can help to mitigate such prob-

lems to some extent. Tested factors include voting, cheap talk, and framework. Our conclusion might be applied to deal with real-world externality issues.

“An Experimental Analysis of Spatial Coordination Games with Local Interactions: A Study of Agglomeration Bonus Mechanisms.” **Simanti Banerjee, Anthony Kwasnica, and James Shortle (Penn State University).**

This study presents conceptual research and experimental analyses of agglomeration bonus mechanisms to achieve spatially contiguous habitat management with interdependencies. Experiments consider local interactions and two treatments—degree of rationality of players and complexity of coordination denoted by the number of players in the coordination game.