Selected Papers

TITLE: Import Demand Analysis (Moderator: Safdar Mohammad, Tennessee State University).

Demand Analysis of the U.S. Fresh Tomato Market. *J. Jung, J. VanSickle, and J. Seale, University of Florida.*

The U.S. fresh tomato industry has been growing significantly over the past several decades. However, as a net importer of fresh tomatoes, the United States imported 36% of its total fresh tomato consumption in 2002. The objective of this study is to estimate U.S. demand for domestic and imported fresh tomatoes using empirical demand models. Conditional price and expenditure elasticities for U.S. fresh tomato demand are estimated.

The Mexican Market for U.S. Sorghum: Is There Room for Growth? *Syamalakumar Pandrang and Jaime Malaga, Texas Tech University.*

Recent developments are affecting the Mexican grain-sorghum market, the primary destination of U.S. sorghum exports. This study estimates the parameters of a Mexican import-demand model for grain-sorghum that could be used to forecast and simulate future bilateral trade trends. The Mexican corn:sorghum price ratio and Mexican poultry production are revealed to be the critical explanatory variables.

Allocation of Global Import Demand for Coffee among the World's Largest Economies: Implications for Developing Countries. *Shiferaw T. Feleke and Lurleen M. Walters, University of Florida.*

The study implies that coffee-producing countries will be worse off with the expansion of exports. Hence, we suggest that they pursue new marketing strategies that involve market segmentation, value-adding activities, and strengthening local and global organizations to establish direct market links with consumers and stabilize prices.

TITLE: Impacts of Imports, SPS, and Technical Change on Agricultural Commodities (Moderator: Saleem Shaik, Mississippi State University).

Effects of Import of Catfish, Crawfish, and Shrimp on the Domestic Prices. *Young-Jae Lee and P. Lynn Kennedy, Louisiana State University.*

Recent increases in imports of catfish, crawfish, and shrimp have caused concern as to their impact on domestic prices. This study seeks to identify the linkages between imports of these goods and producer prices. Increases in imports of catfish and shrimp are shown to decrease related domestic prices. However, recent trends show a simultaneous increase in both imports and domestic prices of crawfish.

TITLE: Trade Policy, Welfare, and Rating Agencies on Textiles and Market Discipline: Implications for Developing Countries (Moderator: Albert J. Allen, Mississippi State University).

Rating in Microfinance: Cross-Country Evidence. *Valentina Hartarska, Auburn University.*

The focus of this paper is on the ability of microfinance-rating agencies to impose market discipline by rating microfinance institutions' performance. Results indicate that not all rating agencies are equal and that only one of the

four raters was able to impose market discipline.

Panel Data Analysis of Trade Policy Effects on U.S. Textile Industries. *William A. Amponsah and Victor Ofori Boadu, North Carolina A&T State University.*

By applying a gravity model, the study confirms that devalued currencies of Asian exporters of textile products and liberalization of trade policies have significantly contributed to the increased imports of textile products to the United States. U.S. implications are derived from the abrogation of the WTO's Agreement on Textiles and Clothing (ATC).

The Welfare Effects of the U.S. African Growth and Opportunity Act on Tanzania. *Aloyce R. Kaliba, University of Arkansas at Pine Bluff; and Josephat Kweka, George Kabelwa, and Ummy Ally, Economic and Social Research Foundation, Tanzania.*

Economic effect of AGOA on Tanzania is analyzed using a CGE model. Results show that rural households tend to lose due to falling prices and wages. There is a potential of developing markets for domestically produced goods. Policies that limit resource shifts from food to cash crops are likely to be welfare improving.

TITLE: Consumer Valuation of Food Attributes (Moderator: James Sterns, University of Florida).

Credence Attributes, Consumer Valuation, and Endowment Effects in Auctions: The Case of Sweet Potatoes. *Lawton Lanier Nalley, Kansas State University; and Darren Hudson and Gregory M. Parkhurst, Mississippi State University.*

There have been few studies that examine valuations of location of origin before and after consumers have consumed the product (or health advertising). Results of nonhypothetical experiments show that knowledge of origin does have an impact on valuation as well as the taste attribute (experience) and the health attribute (credence).

Consumer Response to Genetically Modified Foods. *Molly Brant, Kansas State University; and Daniel S. Tilley and John C. Mowen, Oklahoma State University.*

The consumer trait and characteristic identification, and corresponding relationship to the genetically modified food product's negative reactions, was determined from a 354-respondent, 130-item, mailed survey. The survey and partially mediated model from Mowen's 3M Model of Personality and Motivation explained how personality traits influence genetically modified food reactions.

Perceived Risks of Agro-biotechnology and Organic Food Purchase in the United States. *Arbindra Rimal, Southwest Missouri State University; and Wanki Moon, Southern Illinois University.*

Perceived risks of agro-biotechnology played a dominant role in influencing organic food purchase decisions. Consumers who were concerned about negative attributes of agro-biotechnology, including long-term health and environmental hazards, were the potential organic food consumers. Food safety was one of the important considerations while making organic food purchases.

Relating Beef By-product Value to Live Cattle Prices. *James D. Sartwelle, III, David P. Anderson, Joe L. Outlaw, and James W. Richardson, Texas A&M University.*

This paper examines the interrelationships among beef by-product, cutout, and fed-steer prices. Key relationships were ascertained that could be used to project the likely impacts of policy changes, such as export bans on by-products, on prices in the primary markets. These results should interest analysts and industry practitioners.

TITLE: Policy and Consumer Response (Moderator: Al Wysocki, University of Florida).

Consumer Food Choices as a Reflection of Concerns about Nutritional Attributes. *Sojin Hwang and Wojciech J. Florkowski, University of Georgia; and In-Kyu Lee, Rural Development Administration, Suwon, Republic of Korea.*

Economic growth changed household food consumption patterns in the Republic of Korea. Consumer survey data were used to identify concerns about fat, saturated fat, sodium, sugar, calories, and protein consumption. Results showed income, age, household size, and the geographic location significantly influenced consumer concerns with regard to these nutritional attributes.

An American BSE Crisis: Has it Affected the Value of Traceability and Country-of-Origin Certifications for U.S. and Canadian Beef? *Ruby A. Ward, DeeVon Bailey, and Robert Jensen, Utah State University.*

Auction experiments are used to determine the pre- and post-effects of traceability and country-of-origin information on U.S. consumer willingness to accept U.S. and Canadian beef. The December 2003 incident of BSE in Washington has likely damaged U.S. consumer demand for Canadian beef more than it has for U.S. beef.

TITLE: Impacts of Policy on Land Use, Farm Structure, and Profitability (Moderator: Mike Dicks, Oklahoma State University).

Diversity and Commonality of U.S. Farm Households: A Typology of U.S. Farm Households. *Brian C. Briggeman, Allan W. Gray, and Christine A. Wilson, Purdue University.*

Using 2001 ARMS data, a U.S. farm household typology is developed by clustering farm households into homogenous groups. Labor allocation decisions and the mix of income sources predominantly determine the household types. Differences in farm household types have implications for the design of future farm policies.

Changes in the Spatial Allocation of Cropland in the Ft. Cobb Watershed as a Result of Environmental Restrictions. *David L. Adams, Tracy A. Boyer, and Michael R. Dicks, Oklahoma State University.*

Pollution runoff estimates from SWAT are used in a mathematical programming model to optimally model site-specific crop and conservation practices for pollution abatement in the Ft. Cobb watershed in Southwestern Oklahoma. Results indicate the trade-offs between producer income, sediment and nutrient runoff, and the spatial allocation of crops in the watershed.

Financial Impact of Updating Program Base Acres and Yields on Texas Crop Producers. *J. Marc Raulston, Joe L. Outlaw, and James W. Richardson, Texas A&M University.*

This paper examines the financial impact of crop acreage base updating and program yield updating on Texas agricultural producers according to provisions of the 2002 Farm Security and Rural Investment Act. Regional and commodity-specific differences exist because of changing weather patterns, planting trends, and crop-specific genetic improvements.

TITLE: New Policies for Old Section 22 Commodities (Moderator: Joe Outlaw, Texas A&M University).

Crop Rotations and Dynamic Analysis of Southeastern Peanut Farms. *Archie Flanders, Stanley M. Fletcher, Nathan B. Smith, and Allen McCorvey, University of Georgia; and C. Robert Taylor, Auburn University.*

Agricultural policy objectives provide green payment incentives for farmers to initiate practices with environmental benefits. Velvet beans planted as a cover crop offer an alternative for southeastern peanut farmers to

control nematodes without chemicals while increasing soil fertility. Commodity programs provide government payments that are essential to rural economies of the southeast.

An Estimation of Producer Preferences and the Effects of Wages, Hours, and Gross Sales on Migrant Labor in Alabama's Horticulture Industry. *Moriah J. Bellenger, Deacue Fields, and Ken Tilt, Auburn University.*

Using 2002 survey data, this study employs log-linear regression analysis to examine the effects of migrant labor on wages, hours, and gross sales in Alabama's horticulture industry. A binomial probit model is added to measure producer decisions to hire migrant workers. The presence of migrant workers is found to raise average wages within green industry firms but exhibits no significant effects on hours and sales.

Crop Contracts versus Spot Markets under the Marketing Assistance Loan Program: The Case of Peanuts. *Denis A. Nadolnyak and Stanley M. Fletcher, University of Georgia; and Cesar L. Revoredo, University of Cambridge.*

We analyze two types of crop marketing contracts between agricultural producers and processors, delivery-at-harvest and an "option-to-purchase" that emerged in the U.S. peanut market after the 2002 Farm Act. This contract structure is interpreted as a marketing strategy trying to fill the gap left by the former quota system.

Can the Milk Income Loss Contract (MILC) and Dairy Price Support Program Competing Coexist? *Brian K. Herbst, Joe L. Outlaw, Henry L. Bryant, and David P. Anderson, Texas A&M University.*

The Milk Income Loss Contract (MILC) program has been cited as increasing the government purchases through the Dairy Price Support Program (DPSP). The results indicate that the MILC program has marginally raised purchases and government costs associated for the DPSP.

TITLE: Agricultural Commodity Marketing and Price Analysis (Moderator: Harjanto Djunaidi, Middle Tennessee State University).

An Assessment of the Efficiency of Agribusiness Trucking Companies: A Data Envelopment Analysis Approach. *Albert J. Allen and Saleem Shaik, Mississippi State University; and Joselito K. Estrada, University of Texas–Brownsville.*

The purpose of this study is to investigate the issue of efficiency in the U.S. motor carrier industry using DEA and SFA. Although both methods used the same variables, the resulting efficiency scores were significantly different. This leads to the question of which method is a better measure of efficiency.

Price Volatility and Transmission in the Hog and Pork Markets. *Keithly G. Jones, Animal Products Branch, Markets and Trade Economics Division, Economic Research Service, Washington, DC.*

Farm, wholesale and retail price relationships for U.S. hogs are analyzed. Price-transmission estimates indicate partial adjustment in each market category when price changes in any other market. This implies imperfect price transmission between the market levels. Tests of Granger no-causality show causality in hog and pork markets.

Factors Driving Sow-Breeding Operations to Become Large. *Christopher G. Davis and Doris J. Newton, USDA; and Jeffrey M. Gillespie, Louisiana State University.*

This study examines influences of economic and noneconomic variables on sizes of U.S. sow-breeding operations. Using a probit model and national survey data of U.S. hog operations, our findings indicate that location, facilities, specialization, breeding practices, and risk influence producers' decisions to choose breeding operations with 500 or more sows.

Testing for Seasonal Cointegration and Error Correction: The U.S. Pecan Price–Inventory Relationship. *Mohammed Ibrahim and Wojciech J. Florkowski, University of Georgia.*

This study applies a seasonal, cointegration approach to raw pecan, time series data. Results suggest that shelled pecan prices and shelled and total pecan inventories have common unit roots at both the nonseasonal and seasonal frequencies. Shelled pecan prices are, however, seasonally cointegrated (at the biannual frequency) with pecan cold-storage inventories.

TITLE: Consumer Preference and Willingness to Pay Studies (Moderator: Kenneth Young, University of Arkansas).

The Preference for Round Number Prices. *Joni M. Klumpp, B. Wade Brorsen, and Kim B. Anderson, Oklahoma State University.*

This study determines if a preference for round prices exists in the wheat market and how wheat sales react to price movements around whole dollar amounts. The results show round prices are slightly more prevalent than nonround prices and that transactions increase when price moves above a whole dollar amount.

An Assessment of Consumer Preferences for Strawberry Products. *Michael N. Bruchhaus and Roger A. Hinson, Louisiana State University.*

Louisiana strawberry production has decreased over many years. California has exploited its production advantages and marketing efficiency to increase production. Conjoint analysis is used to examine consumers' preferences for selected product attributes of fresh strawberries in Louisiana. Consumers put the highest relative importance on brand/origin and, to a lesser degree, price.

Frozen Catfish Retail Pack: A Study of Consumers' Willingness to Pay. *Kwamena Quagrainie, University of Arkansas at Pine Bluff.*

The study examined the potential for household-size packs of catfish fillets for grocery sales. Households would purchase six-fillet packs in various packaging materials except in Styrofoam. The average price households are willing to pay is $4.37/lb. Households that prepare catfish fried have a higher probability of purchasing such retail packs.

Comparison of Stated Choice and In-Store Experimental Methods in Predicting Actual Market Behavior for Freshwater Prawn (*Macrobrachium Rosenbergii*) Consumers. *R. K. Gallardo, Oklahoma State University; and T. R. Hanson and M. D. Hudson, Mississippi State University.*

The stated choice (SC) and actual, revealed pricing/purchase experimental methods were compared for their ability to predict purchasing behavior and willingness-to-pay for freshwater prawns. SC hypothetical bias may be a consequence of difficulties in controlling factors affecting real-world situations, small sample sizes, and confusion related to the new product.

TITLE: Beef Cattle Marketing and Management Strategies (Moderator: James M. Trapp, Oklahoma State University).

Examining the Choice-Select Discount for Fed Cattle. *Robert Hogan, Jr., University of Arkansas, and Clement E. Ward, Oklahoma State University.*

The choice-select discount in fed cattle pricing grids is a significant factor in determining the net grid price. Cursory analysis of data since 1997 evidences a structural change approximately when USDA-AMS mandatory price reporting began. This is important for producers/feeders deciding when to feed and market fed cattle.

Managing an Industry in Crisis: BSE in Canada. *Jared G. Carlberg, University of Manitoba, and Derek G. Brewin, University of Manitoba.*

A BSE discovery in a downer cow in May 2003 in Alberta caused the closure of all international markets to live cattle exports. The Canadian cattle industry has lost $5.5 billion as a result. This paper describes the BSE threat, the border closures, and policy responses and their efficacy.

BSE, U.S. Beef Trade and Cattle Feeding Industry. *Lal K. Almas and W. Arden Colette, West Texas A&M University; and Stephen H. Amosson, Texas Cooperative Extension.*

An analysis of recent changes in the U.S. beef trade and cattle industry after BSE was conducted. Export losses are estimated at $2.73 billion for 2004. U.S. beef imports have increased. BSE has also impacted live cattle trade. The lower production and robust consumer demand is helping to support cattle prices.

TITLE: Merger, Integration, and Strategic Alliance in Agribusiness Industries (Moderator: Tony V. Johnston, Middle Tennessee State University).

Case Studies of Strategic Alliances in Southeastern Beef Production. *Jeffrey Gillespie, Angel Bu, and Robert Boucher, Louisiana State University.*

Three calf marketing and three commercial beef carcass strategic alliances were examined via case study to determine alliance structure and whether each addressed risk, transaction costs, capital availability, and other concerns. The alliances reduced transaction costs and increased information flow among segments but did not specifically address risk.

Horizontal Consolidation in the U.S. Food Processing Industry: Boon or Bane? *Emilio Tostão and Chanjin Chung, Oklahoma State University.*

A bilateral, oligopoly model is used to measure the effect of increased concentration on industry market power and cost efficiency. Consistent with previous studies, we find that cost efficiency gains dominate potential market power effects from increased concentration in the U.S. wholesale beef industry.

TITLE: Issues in Risk, Profitability, and Self-Sustainability among Lending Institutions and Farmer Cooperatives (Moderator: Valentina Hartarska, Auburn University).

Profitability and Risk of U.S. Agricultural Banks. *Feng Zhang and James E. Epperson, University of Georgia.*

A recursive system of profitability and risk equations is estimated to compare the performance of agricultural with nonagricultural banks and identify factors that affect performance. Results show that agricultural banks outperform nonagricultural counterparts after controlling for risks and other factors. The impact of off-balance-sheet business on performance is also investigated.

Risk Management Strategies for a Producer-Owned Peanut-Shelling Cooperative. *Robert J. Byrne, Nathan B. Smith, Stanley M. Fletcher, and Barry J. Barnett, University of Georgia.*

The 2002 Farm Bill altered the peanut program. Peanut producers have indicated interest in a New Generation Shelling Cooperative (NGSC). This study simulates inherent risks and potential risk management strategies for an NGSC. These strategies are ranked using various metrics to understand their impact on risk and return.

Potential of Credit Scoring in Microfinance Institution in the United States (Community Venture Corp. of Kentucky Taken as Case Study). *Jiang Hou, Jerry R. Skees, and Wei Wang, University of Kentucky.*

As one of the instruments to enhance the microfinance institutions' self-sustainability,

credit scoring models that have been widely used in formal financial institutions can be used in the practice of microfinance. Statistical models will be established and tested to realize that goal.

TITLE: Determinants of Market Prices, Demand, and Cost Efficiency (Moderator: Pierre I. Boumtje, Southern Arkansas University).

Does The Institutional Loyalty Hypothesis Really Work? The Case of MTSU Students' and Employees' Preference Toward MTSU-Produced Milk. *Harjanto Djunaidi, Tony V. Johnston and Tim Redd, Middle Tennessee State University.*

Proponents of the institutional loyalty hypothesis suggest that students and/or employees of educational institutions are motivated to buy and willing to pay premium prices for products that carry the institution's name. This hypothesis is rejected based on ANOVA, Post Hoc, and cross-tabulation tests.

Steel: Price Links between the Primary and Scrap Market. *Irene M. Xiarchos, West Virginia University.*

Steel is used as a case study to decompose the links between primary and secondary markets to examine how prices in the one market influence prices in the other and how volatility can be transmitted between them.

Economics of Transporting Poultry Litter from Northwest Arkansas to Eastern Arkansas Croplands. *Kenneth Young, R. I. Carreira, H. L. Goodwin, and Eric Wailes, University of Arkansas.*

Applying baled litter from northwest Arkansas shipped by truck with backhauls, supplemented with chemical fertilizers, provided the most cost-efficient method to supply nutrients to crops in eastern Arkansas, according to a GAMS optimization. Shipping raw litter by truck and barge is the optimal choice when backhauls or baling is unavailable.

TITLE: Influence of Business Structure and Decisions on Financial Performance of Farm Businesses (Moderator: Cesar L. Escalante, University of Georgia).

The Sustainable Growth Paradigm's Application to U.S. Farm Businesses. *Cesar L. Escalante, University of Georgia; and Calum G. Turvey, Rutgers University.*

The sustainable growth paradigm is used to analyze aggregate output decisions across U.S. agricultural production regions. Results show that the farm sector has adapted to positive or negative sustainable growth challenges (SGC) and that, from an equilibrium point of view, SGC countercyclical measures indicate a usual tendency towards balanced growth.

The Structure Performance Hypothesis and the Efficient Structure Performance Hypothesis Revisited: The Case of Agribusiness Commodity and Food Products Truck Carriers in the South. *Albert J. Allen, Saleem Shaik, and Albert E. Myles, Mississippi State University; and Safdar Muhammad, Tennessee State University.*

Two competing hypotheses on market structure and performance of firms are the traditional structure–conduct–performance (SCP) paradigm and the efficiency-structure hypothesis. This paper reveals the profits made by firms in the trucking industry were because of greater efficiencies than their competitors and not because of collusive activities.

TITLE: Optimization of Production and Input Use (Moderator: Carl Dillon, University of Kentucky).

Comparison of Decision Rules for Subsurface Drip Irrigation Practices Using a Nonlinear Mathematical Programming Model. *Sayed Saghaian, Carl Dillon, and Juma Salim, University of Kentucky; and Morali Kanakasabai, Chicago Climate Exchange, Inc.*

A comparison of decision rules has been made for case studies of corn production using

subsurface drip irrigation under three agricultural management practices (no irrigation, uniform irrigation, and variable rate irrigation). The uniform irrigation strategy appeared to perform better than the other two management practices under different risk scenarios.

Nitrogen Fertilization of Growing Wheat Based upon Site-Specific Optical Sensing. *Jon Biermacher, Francis M. Epplin, John B. Solie, William R. Raun, B. Wade Brorsen, and Marvin L. Stone, Oklahoma State University.*

A site-specific fertilizer application system that uses optical reflectance measurements of growing plants to estimate fertilizer requirements and that can apply liquid nitrogen fertilizer at a grid level of four square feet is under development. The objective is to determine if the site-specific system is more economical than alternative systems.

The Variable-Rate Decision for Multiple Inputs with Multiple Management Zones. *Roland K. Roberts, Burton C. English, and James A. Larson, University of Tennessee.*

Research has evaluated the profitability of variable-rate versus uniform-rate application of a single input in fields with multiple management zones. This paper addresses the variable-rate decision for multiple inputs and management zones. The decision-making framework is evaluated for nitrogen and water applied to cotton in fields with three management zones.

Comparing Production Optimization Strategies for Texas Panhandle Producers in Response to Declining Water Availability due to Decline in the Ogallala Aquifer. *W. Arden Colette, Lal K. Almas, Soeng Park, West Texas A&M University.*

In response to the declining availability of irrigation water from the Ogallala aquifer, irrigation at the level where MVP = MFC increases net returns over either irrigating to maximize production or meet 100% of the potential evapotranspiration (PET) requirements.

This prolongs the economic life of the aquifer and increases the efficiency of irrigation.

TITLE: Evaluation of Alternative Tillage Practices (Moderator: Jeff Gillespie, Louisiana State University).

Economies of Size for Conventional Tillage and No-till Wheat Production. *Francis M. Epplin, Darrel D. Kletke, and Thomas F. Peeper, Oklahoma State University; and Curtis J. Stock, Arizona Agricultural Statistics Service.*

Production costs and economies of size for both conventional tillage and no-till wheat production were determined. The reduction in the price of glyphosate after the patent expired improved the relative economics of no-till for continuous monoculture winter wheat. Production costs differ across farm size and by production system.

Whole Farm Economic Evaluation of No-Till Rice Production in Arkansas. *K. Bradley Watkins, Jason L. Hill, Merle M. Anders, and Tony E. Windham, University of Arkansas.*

Rice in Arkansas is typically produced using intensive tillage. No-till rice has been studied, but the research focus has been limited to impacts on yields and per-acre net returns. This analysis evaluates the profitability of no-till rice at the whole-farm level using both enterprise budget analysis and linear programming.

Impact of the Adoption of Less-Tillage Practices on Overall Efficiency. *Michael Langemeier, Kansas State University.*

This paper evaluated the impact of the adoption of less-tillage practices on the overall efficiency of a sample of farms in Kansas. The paper also explored the relationship between overall efficiency, farm size, and less tillage. Farms that have adopted less-tillage practices were relatively more efficient.

TITLE: Income Support and Risk Management (Moderator: John Westra, Louisiana State University).

Specialty Crop Producers' Crop Insurance Decisions. *J. Jung, R. Weldon and J. Van-Sickle, University of Florida.*

The role and implication of crop insurance for program crops may be different from those for nonprogram crops, including specialty crops. The results from the studies for program crops may not be applicable to specialty crop cases. The objective of this study is to analyze factors affecting specialty crop producers' uses of crop insurance as a risk management tool.

Evaluating the Effectiveness of Price and Yield Risk Management Products in Reducing Revenue Risk for Southeastern Crop Producers. *Todd D. Davis, Clemson University.*

A nonparametric simulation model incorporating price and yield risk determined gross revenue less risk management costs for corn, cotton, and soybeans produced with and without irrigation. Risk management alternatives protecting price risk, yield risk, and combinations of price and yield were simulated. Combination strategies provided the greatest revenue risk reduction.

Government Payments: Economic Impact on Southeastern Peanut Farms. *Stanley M. Fletcher, Archie Flanders, Nathan B. Smith, and Allen McCorvey, University of Georgia.*

Southeastern peanut farms with diversified field crops use government payments to supplement market receipts. Production in 2002 represented growing conditions under adverse weather, whereas 2003 represented optimal conditions. Representative farm analysis provides insight into allocation of market receipts and government payments for meeting variable costs and fixed costs.

Farm Profits from Stochastic and On-Farm Yields of Bt and Non-Bt Cotton in the Mississippi Delta. *Swagata "Ban" Banerjee and Steven W. Martin, Mississippi State University; and Michael E. Wetzstein, University of Georgia.*

Net per-acre returns and total returns for an average cotton farm in the Mississippi Delta are calculated from observed and simulated yields. Results indicate higher mean profits with spray than without. For any positive refuge level, mean returns are higher and more stable (or less risky) when spray is applied.

TITLE: Farm Efficiency, Investment, and Growth (Moderator: Michael Langemeier, Kansas State University).

Cost Efficiency Estimates for a Sample of Crop and Beef Farms. *Michael Langemeie and Rodney Jones, Kansas State University.*

This paper examines the impact of specialization on the cost efficiency of a sample of crop and beef farms in Kansas. The economic total expense ratio was used to measure cost efficiency. The relationship between the economic total expense ratio and specialization was not significant.

An Examination of the Relationship Between Overall Efficiency and Farm Experience. *Michael Langemeier and Kelly Bradford, Kansas State University.*

This paper examines the relationship between overall efficiency and years of farm experience for a sample of Kansas farms. In addition to years of farm experience, overall efficiency is significantly related to farm size, percentage of time devoted to farming, and percentage of acres owned.

Factors Impacting Farm Growth. *Mario Villatora and Michael Langemeier, Kansas State University.*

This paper examined the relative importance of farm size, farm type, managerial abil-

ity, capital structure, operator age, family size, and off-farm income in explaining farm growth rates. Farm type, managerial ability, and operator age were significantly related to farm growth rates.

Investment Analysis of Alternative Dairy Systems under MILC. *Phillip R. Eberle, C. Matthew Rendleman, and William C. Peterson, Southern Illinois University Carbondale; and Darren E. Moody, United States Department of Agriculture-Agricultural Marketing Service.*

Three dairy systems, 120-cow grazing, 120-cow conventional, and 600-cow concentrated, were evaluated by internal rate of return (IRR) accounting for the Milk Income Loss Contract (MILC). With MILC, the grazing and conventional systems had higher IRRs. Without MILC, the 600-cow dairy had the highest IRR. Results were sensitive to assumptions.

TITLE: Precision Agriculture Management (Moderator: Carl Dillon, University of Kentucky).

Measuring the Impacts of Urbanization on the Competitiveness and Production of Manure Nutrients on Dairy Farms. *Richard Nehring, Eric O'Donoghue, Carmen Sandretto, and Charles Barnard, Economic Research Service, U.S. Department of Agriculture.*

Dairy farms located in urban-influenced areas face additional competitive and environmental pressures compared with rural dairy farms. Trends in excess nitrogen and phosphorus from 1991 through 2002 were tracked and measures of economic performance for dairy farms in the Northern Crescent and eastern Heartland were examined using ARMS data. We find that urban dairy farms are less technically and environmentally efficient than rural dairy farms.

Profitability of Dairy Cattle through Precision Livestock Farming Management Practices. *Juma K. Salim, Carl R. Dillon, Say-*

ed Saghaian, Jack McAllister, and Donna M. Amaral-Phillips, University of Kentucky.

The purpose of this study is to compare and contrast the profitability of different dairy management practices through precision livestock farming. Feed analysis and crop yields were simulated. Mathematical model was used for profit maximization. The results indicated that the proposed modification had a higher profit than the base plan.

An Economic Evaluation of Precision Deep-Tillage Practices through the Analysis of Comparative Enterprise Budgets. *Chris Pierce, Carl Dillon, and Larry G. Wells, University of Kentucky.*

Precision deep tillage allows for lower use of tillage though recognized variation within a field. Comparative enterprise budgets, break-even, and sensitivity analysis were preformed to prove that under long-term no-till conditions precision deep tillage can be a profitable form of tillage that will enter an optimal producer strategy.

TITLE: Production Practices and Product Attributes (Moderator: Roland Roberts, University of Tennessee).

The Effect of Recent and Futuristic Changes in Cotton Production Technology on Direct and Fixed Costs Per Acre, Mississippi, 2004. *D. W. Parvin and Steve W. Martin, Mississippi State University.*

The introduction of genetically modified seed technology dramatically changed cotton production practices. Production systems based on reduced tillage and BtRR varieties improved net returns by $47.35 per acre (53%) when compared with systems based on conventional tillage and nontransgenic varieties. The impacts of other technology induced changes are reported.

Effects of Alternative Lime Application Rates on Cotton Profitability with Varying Cover Crops, Nitrogen, and Tillage Meth-

ods. *Rebecca L. Cochran, James A. Larson, Roland K. Roberts, and Donald D. Tyler, University of Tennessee.*

Soil acidity and cotton yields are influenced by cover crop, nitrogen, and tillage method. Applying half the recommended lime rate may be possible without reducing cotton yields. Using a nitrogen-intensive cover crop and applying less nitrogen should mitigate the effects on soil acidity and yields.

TITLE: Supply, Cost, and Risk Analysis (Moderator: Sayed Saghaian, University of Kentucky).

Managing Crop Production Risk with Crop Index Insurance Products. *Xiaohui Deng, Barry J. Barnett, Yingzhuo Yu, and Gerrit Hoogenboom, University of Georgia.*

Index insurance products can eliminate the asymmetric information problem in MPCI. Purchasers of index products are exposed to basis risk. This study examines the feasibility of various index products, which are based on county yields, CDD, and predicted yields from a crop simulation model for corn farms in southern Georgia.

Producer Characteristics and Peanut-Cost Efficiency in the Southeast: Implications for the Farm-Level Impacts of the 2002 Farm Act. *Denis A. Nadolnyak and Stanley M. Fletcher, University of Georgia; and Valentina Hartarska, Auburn University.*

Peanut production efficiency in the Southeast is analyzed for assessing farm-level impacts of the 2002 Farm Act. Stochastic frontier analysis uses data from 2001 Peanut Farm Survey. Results show that production efficiency cannot be attributed to quota ownership. Certain other farm attributes, such as size and age, are also important.

Dairy Supply Response under Stochastic Trend and Seasonality: A Structural Time Series Analysis. *Murali Adhikari, Alabama A&M University; Laxmi Paudel and Jack E. Houston, The University of Georgia; and Nirmala Devkota, Louisiana State University.*

A structural time-series methodology was used to examine the role of stochastic trend and seasonality in dairy supply response model. In our analysis, the dairy supply model with stochastic seasonality and deterministic trend performs best in terms of diagnostic tests, goodness-of-fit measures, and forecasting accuracy.

TITLE: Management Practices in Animal Production to Improve Environmental Quality (Moderator: David Anderson, Texas A&M University).

Awareness of EQIP and Subsequent Adoption of BMPs by Cattle Farmers. *Joyce Obubuafo, Jeffrey Gillespie, Seon-Ae Kim, and Krishna Paudel, Louisiana State University.*

In summer 2003, roughly half of Louisiana cattle producers had never heard of the Environmental Quality Incentives Program. Those who had heard of it and had applied for funds were more diversified, larger, and had contact with Natural Resources and Conservation Service personnel within the past year.

Influence of Cost Share and EQIP Incentive Payments on Adoptions of Best Management Practices by Louisiana Dairy Farmers. *Wayne M. Gauthier, Krishna P. Paudel, John Westra, and Larry Hall, Louisiana State University.*

Adoption of best management practices (BMPs) minimizes the negative externalities created by the manure by-product of milk production. Logistic regression procedure was used to understand the impact of socioeconomic attributes of Louisiana dairy farmers on BMP adoption decision relative to the cost share and incentive payment.

System Level Economic Analysis of Swine Diet Modifications. *Arthur L. Stoecker and Yi-Hung Lin, Oklahoma State University.*

Experimental data from low nitrogen and phosphorus diets are being used to validate and/or modify the NRC swine growth model. A profit maximizing daily growth model that considers feed costs, excretion, waste management costs, and length of feeding period is being developed.

Count Data Analysis of the Adoption of Best Management Practices in Beef Cattle Production. *Seon-Ae Kim, Jeffrey M. Gillespie, and Krishna P. Paudel, Louisiana State University.*

Factors influencing the adoption of Best Management Practices by cattle producers are analyzed using negative binomial regression analysis. Fifteen hundred farms were surveyed. Analysis identified diversification, hilly land, contact with regulatory personnel, college education, household income, and percentage of income from beef as significant factors in BMPs adoption.

TITLE: Value of Environmental Amenities (Moderator: Jennie Popp, University of Arkansas).

Toward a Generalizable Measure of the Value of a Change in Pesticide Use. *Olga Sydorovych and Michele Marra, North Carolina State University.*

This study develops a comparable measure of pesticide risks. Based on revealed preference method an index system is developed for individual pesticides combining the information on different environmental and health risks. Data obtained from a survey of U.S. farmers has revealed that on average the adoption of Roundup Ready soybeans results in reduced toxicity of herbicides.

The Value of Hunting Package Attributes. *Virginia Buller, Darren Hudson, Greg Parkhurst, and Andrew Whittington, Mississippi State University.*

Economic impacts of hunting activities reveal opportunities for landowners to capitalize on apparent market demand for fee-access hunting. This paper discusses the marginal values of hunting package attributes. The results will provide landowners the information needed to make optimal management decisions.

Estimating the Economic Value of Temporary and Permanent Carbon Sequestration Activities on Agricultural Land. *Mark Sperow, West Virginia University.*

This paper estimates the value of carbon from soil sequestration and emission reductions from setting aside highly erodible land. Increases in soil carbon are estimated using the Intergovernmental Panel on Climate Change soil organic carbon inventory method and NRI data. Emission reductions are estimated using fuel use data from USDA-ERS.

Estimating the Supply Curve for Nutria Pelts from Coastal Louisiana and the Impacts Associated with Declining Prices. *Cheikhna Dedah, Walter R. Keithly, Jr., and Richard F. Kazmierczak, Jr., Louisiana State University; and Jack C. Isaacs, Louisiana Department of Wildlife and Fisheries.*

Nutria harvests vary with price. As pelt prices declined, nutria populations—and wetland degradation—have risen. This paper develops a nutria supply model to predict harvests at various prices, which are incorporated into a wetland loss model to determine how alternative incentive programs affect changes in wetland degradation.

TITLE: Kuznets Curves and Social Capital (Moderator: Jeffery Jordan, University of Georgia–Griffin Campus).

Farmers' Choice of Using Sustainable Agricultural Practices: A Social Capital Approach. *Jeffrey L. Jordan, University of Georgia.*

This paper explores, in the context of social capital theory, why farmers choose to use sustainable agricultural practices. The hypothesis tested is that farmers who exhibit higher levels of social capital will adopt such practices more often than those who exhibit lower levels of social capital.

Carbon Dioxide (CO_2) Emissions in Latin America: Looking for the Existence of Environmental Kuznets Curves. *Krishna P. Paudel, Hector Zapata, and Alejandro Diaz, Louisiana State University; and Keshav Bhattarai, Central Missouri State University.*

We estimated environmental Kuznets curve (EKC) for carbon dioxide for 16 Latin American countries using nonparametric, semi-parametric, and parametric specifications. Results indicated that most of the Latin American countries are still in the rising portion of the EKC with respect to CO_2 pollution.

The Environmental Kuznets Curve Under a New Framework: Role of Social Capital in Water Pollution. *Hassan Marzoughi, Krishna P. Paudel, and Mark A. Schafer, Louisiana State University.*

We advance a case for an inclusion of social capital in the environmental Kuznets curve (EKC) analysis using highly disaggregated data on water pollution in Louisiana. Social capital index and other variables are used in the parametric and spatial panel regression models to explain water pollution dynamics.

TITLE: Water Potpourri (Moderator: Kelly Bryant, University of Arkansas at Monticello).

The Use and Opportunity of Cooperative Organizational Forms as an Innovative Regulatory Tool Under the Clean Water Act. *Kurt Stephenson, Virginia Tech; and Leonard Shabman, Resources for the Future.*

Numerous market-based policy reforms are advocated as ways to improve regulatory programs under the Clean Water Act. Cooperative organizational forms that consolidate regulatory requirements for multiple regulated parties are an overlooked but useful avenue for reform. Examples from the water quality and wetland programs illustrate the potential advantages.

The Gulf of Mexico Grouper Fisheries: Heterogeneous Fleet and Expectations in Fishermen's Decision. *Hamady Diop, Walter R. Keithly, Jr., and Richard R. Kazmierczak, Jr., Louisiana State University.*

This study focuses on Gulf of Mexico fishermen's expectations about their revenues and risks when participating in the grouper fishery using handlines or longlines. Results indicated that expected revenues follow a seasonal and a spatial pattern. Fishermen using longline are risk averse whereas handliners are risk takers.

TITLE: Income and Employment Interdependencies (Moderator: James Bukenya, Alabama A&M University).

The Interdependence between Location, Employment, and Commuting Patterns in Alabama. *Samuel Muguku and James O. Bukenya, Alabama A&M University.*

The paper examines the causal relationships and pattern of spatially distributed employment growth and commuter patterns in Alabama and surrounding states using a distance deterrence model. The assumption of the analysis is that the numbers of commuters across counties depend on factors related to each county and on factors related to the entire region only through the commuting distances.

Assessing Demographic Changes and Income Inequalities: A Case Study of West Virginia. *Yohannes G. Hailu and Tesfa G. Gebremedhin, West Virginia University; and Randall W. Jackson, Regional Research Institute (West Virginia University).*

This study investigates demographic change and income inequalities, and relationship between economic growth and income inequality in West Virginia. Income growth was

positively related with population and employment growth but is significantly and negatively related with income inequality. This indicates that higher income inequality is associated with slower economic growth.

TITLE: Economic Impact of Health, Community Services, and Infrastructure (Moderator: Alan Barefield, Mississippi State University).

Health Care and Productivity in East Central Mississippi. *Garen K. Evans and Shivakumar Sundaram, Mississippi State University.*

Work-site wellness programs improve the health and quality of life of workers and result in higher productivity. Data from a regional health survey suggests that more than $32 million of labor income is lost annually because of poor health, effectively increasing unemployment by more than 40% in east central Mississippi.

Estimating the Economic Impact of Disease on a Local Economy: The Case of Diabetes in the Lower Rio Grande Valley of Texas. *Joselito K. Estrada and Gautam Hazarika, University of Texas–Brownsville; and H. Shelton Brown, III, The University of Texas Health Science Center–Houston.*

The purpose of this study is to investigate the economic impact of wage reductions that people experience from contracting diabetes. Incorporating wage reduction information into an input–output model reveals that as diabetics' wages decrease by $1.00, production and income in the local economy decline by $0.36 and $0.38, respectively.

Direct and Indirect Effects of Public Infrastructure on Regional Economic Growth in Japan: An Application of the Covariance Structure Model by Geographical Classification Area. *Yoji Kunimitsu, National Institute for Rural Engineering, Japan.*

The direct and indirect effects of public infrastructure (PI) were evaluated by a covari-

ance structure model. Empirical results showed the positive indirect effect, crowding-in effect, and the direct effect as an input factor and differences of these effects by geographical areas and periods.

TITLE: Economic Impact of Recreation, Agriculture, and E-commerce (Moderator: Garen Evans, Mississippi State University).

How Much is E-commerce Worth to Rural Businesses? *Susan Watson, Gary Kennedy, and Kenneth Rea, Louisiana Tech University; and O. John Nwoha, University of Arkansas.*

The probability of a business paying for an e-commerce presence ultimately depends on demographic features, experiences with e-commerce, technological expertise, and knowledge of e-commerce opportunities and limitations. Results allow for the assignment of probabilities associated with various business profiles to determine the willingness to pay for an e-commerce presence.

Impact of Hunting and Fishing on Mississippi Counties. *Andrew Whittington, Greg Parkhurst, Darren Hudson, and Virginia Buller, Mississippi State University.*

Mississippi is largely agricultural with access to many watersheds, the combination of which makes the state attractive to hunters and fishermen. This paper investigates the impact of hunting/fishing on the sales tax revenue in the counties of Mississippi. Our results indicate that a 1% increase in the nonresident hunting/fishing license sold increases tax revenue by $14,535.65 per county on average.

Economic Impacts of Agricultural Sector and Agricultural Exports on the Kansas Economy. *Sreedhar Upendram, Kansas State University.*

This study determines the impact of agriculture and agricultural exports on Kansas economy using an input–output framework. The spillover effects of agriculture and agricultural exports to other sectors of the econ-

omy are computed in this research using Impact Analysis for Planning (IMPLAN) system.

TITLE: Modeling Agricultural Risk and Commodity Markets (Moderator: Carlos Carpio, North Carolina State University).

Common Trends, Common Cycles, and Price Relationships in the International Fiber Market—Evidence from a Seemingly Unrelated Structural Time Series. *Mohamadou L. Fadiga and Sukant K. Misra, Texas Tech University.*

This study shows that the stochastic process that governs price fluctuations in the international fiber market has transitory and permanent components. The results also indicate structural relationships between cotton price and wool price, wool price and oil price, rayon price and cotton price, and between polyester price and cotton price.

Econometric and Time-Series Model Selection: A Choice between Two Possible Approaches to Assess Linkages between the United States and Export Chicken Markets. *Harjanto Djunaidi, Middle Tennessee State University.*

Econometric and time-series model are used to study price linkages between the United States and export markets. VAR model showed that export price is affected by its past and leg-quarters prices. Econometric analysis showed a negative relationship between export price and broiler production which confirmed a large country effect.

TITLE: Econometrics of the Environment, the Climate, and Agriculture (Moderator: Olga Sydorovych, North Carolina State University).

Using the AIR Weather Index to Estimate the Contribution of Climate to Corn and Soybean Yields in the United States *Gerhard Zuba, Oscar Vergara, and Tim Doggett, AIR Worldwide Corporation, Boston, MA.*

Using historical production data at the county level and statistical analysis, we investigate climate contributions to corn and soybean yields between 1974–2003. Yield trends are decomposed into two components: the technology-derived trend and the trend resulting from climate variability. Implications for agricultural risk management and farm policy are discussed.

Environmentally Adjusted Elasticity Measures. *Saleem Shaik, Mississippi State University.*

Here, using input, output, and nitrogen-pollution data related to one state, we propose to extend the elasticity concept to include environmental pollution treated as undesirable output to provide the environmentally adjusted elasticity measures for the period 1936–1997 in a two-step procedure.

Use of Seemingly Unrelated Parametric and Semiparametric Panel Models in the Environmental Kuznets Curve Estimation. *Hector Zapata and Krishna P. Paudel, Louisiana State University.*

We estimated the environmental Kuznets curve for point (mercury) and nonpoint (nitrogen, phosphorus, and dissolved oxygen) source water pollutants as a function of income in parametric and semiparametric functional forms of the panel data model. Seemingly unrelated panel formulation did not provide gain in efficiency over the panel data model.

TITLE: Issues in Agricultural Economics Education (Moderator: Joey Mehlhorn, University of Tennessee at Martin).

Research Productivity and Selected Characteristics of Agricultural Economics Faculty in the Southern Region: A Quarter of a Century Later. *Molly Brant, Leah J. Tsoodle, Bill B. Golden, and Allen Featherstone, Kansas State University.*

Productivity and characteristics of southern agricultural economics faculty was compared with other regional faculty. With few exceptions, faculty members in the Southern region are as productive as their counterparts. We also found that the majority of respondents in all regions considered themselves in the top-quartile in all areas.

Determinants of Agricultural Economic Faculty Salaries: A Quarter of a Century Later. *Bill B. Golden, Leah J. Tsoodle, Oluwarotimi O. Odeh, and Allen M. Featherstone, Kansas State University.*

Factors influencing the salaries of university agricultural economists were examined and compared with previous work. Results suggest the impact of publication output has remained relatively constant for the past 25 years, whereas other factors like grantsmanship have changed significantly. Additional analyses suggest significant impacts of appointment apportionment and Ph.D. programs.

Competencies of Entry-Level College Graduate Employees in Agribusiness. *Stephen E. Miller, Todd D. Davis, Wilder N. Ferreira, Lawrence D. Fredendall, and Linda B. Nilson, Clemson University.*

Agribusiness firms were surveyed to assess the competencies of their recent college-graduate employees according to whether the employees had agricultural or business degrees.

Both graduate types received high-average ratings for their computer skills and low-average ratings for their knowledge of cultural and economic differences in international business.

TITLE: Extension Issues (Moderator: Bob Stark, University of Arkansas at Monticello).

Information Sources Preferred by Limited-Resource Farmers in Using Agricultural Risk Management Tools. *Ingrid Nya Ngatchou, James O. Bukenya, and Duncan M. Chembezi, Alabama A&M University.*

The paper examines limited-resource farmers' perceptions of the usefulness of selected sources of risk management information. The rationale is to understand the information needs of this group of farmers and to customize outreach programs to address their needs.

A Pilot Program to Assist CAFOs in Using Weather Data to Minimize Manure Management Risk. *Raymond E. Massey and Chris Boessen, University of Missouri.*

This paper summarizes a pilot project to disseminate site-specific weather information that has been processed to estimate field runoff potential of land-applied manure. Preliminary feedback indicates the program has value but that additional information is needed to understand how farmers use weather information to make decisions within the regulatory constraints they face.