

# Selected Papers

## Annual Meetings

**TITLE: Surveys, Data and Probabilistic Forecast** (Moderator: Nirmala Devkota, Louisiana State University).

**Surveys: What Does One Need to Know More About Them?** *Harjanto Djunaidi, School of Agribusiness and Agriscience, Middle Tennessee State University.*

The use of surveys as a data collection method gained its popularity in recent years. However, one needs to be aware of making measurement errors related to incorrect survey design. The way that a question is asked and the choices the respondents have to choose from will shape the sample space that affects the expected value, variance, and covariance of the random variables being measured.

**Choice of the Empirical Definition of Zero in the Translog Multiproduct Cost Functional Form.** *Yapo G. N'Guessan, Allen Featherstone, and Hanas A. Cader, Kansas State University.*

This study examines the impacts of empirical definition of zero output values on price elasticities, economy of scope, and scale using the Translog cost function. A system of cost and factor share equations with regularity conditions imposed is estimated. Results show that the choice of default values affects policy recommendations.

**TITLE: Application of Contemporaneous Econometric Methods** (Moderator: Octavio Ramirez, New Mexico State University).

**Parametric and Nonparametric Evaluation of USDA Hog Price Forecast.** *Williams Olatubi, Economist, Ashagre Yigletu, Southern University A&M, Christopher G. Davis, ERS/*

*USDA, and Sung C. No, Southern University A&M.*

This study examines forecasting optimality of USDA hog price model using various evaluation methods and also constructs VAR models based on an input–output price relationship. Parametric tests indicate that USDA forecasts are marginally optimal; nonparametric methods show that USDA forecasts provide a better direction of hog–future-price movements than VAR models.

**Estimation of Production Functions Using Average Data.** *Matthew J. Salois, Grigorios Livanis, and Charles B. Moss, University of Florida.*

Agricultural economists rely on aggregated data at various levels, depending on data availability and the econometric techniques employed. However, the implication of aggregation on economic relationships remains an open question. To examine the impact of aggregation on estimation, Monte Carlo techniques and data are employed on production practices.

**Economics of Management Zone Delineation in Cotton Precision Agriculture.** *Margarita Velandia, Roderick M. Reyes, Eduardo Segarra, and Kevin Bronson, Texas Tech University.*

This paper develops a management zone delineation procedure based on a spatial statistics approach and evaluates its economic impact for the case of Texas cotton production. The results show that there is a potential economic value for using a spatial statistics approach to management zone delineation.

**TITLE: Best Management Practices (BMP) Adoption, Environment, and Economic Performance** (Moderator: Nirmala Devkota, Louisiana State University).

**Determination of BMP Adoption Effectiveness in the Louisiana Dairy Production Region.** *Larry M. Hall, Krishna P. Paudel, Wayne M. Gauthier, John V. Westra, and Huizhen Niu, Louisiana State University.*

AVGWLF and PREDICT software packages were used to estimate the Louisiana dairy industry's effect on water quality. Results indicated a 20% decrease in N and P but little decrease in sediment pollution even when best management practices were adopted in 75% of land.

**Are Friendly Farmers Environmentally Friendly? Environmental Awareness as a Social Capital Outcome.** *Abdul B.A. Munasib and Jeffrey L. Jordan, University of Georgia.*

This paper examines the hypothesis that social capital at the individual level affects environmentally friendly practices. Social capital represents the social connectedness of the individual. An individual with higher social capital is more likely to have better exposure and access to information about the importance of environmentally friendly practices.

**Environmental Stewardship and Economic Performance: The Case of Corn and Soybean Farms.** *Jorge Fernandez-Cornejo and Gavrav Ghosh, Economic Research Service, USDA.*

This paper compares survey results for U.S. corn and soybean producers, who were asked about their adoption of environmentally beneficial practices and their structural and socioeconomic characteristics. The paper also presents estimates of a Poisson model to examine the impact of farm size, off-farm employment, and other factors on adoption.

**Knowledge, Application, and Adoption of Best Management Practices by Cattle**

**Farmers under the Environmental Quality Incentives Program—A Sequential Analysis.** *Joyce Obubuafo, Jeffrey Gillespie, Krishna Paudel, and Seon-Ae Kim, Louisiana State University, Baton Rouge.*

This study examines Louisiana farmers' awareness EQIP and their subsequent adoption of best management practices (BMPs) using a sequential logit model. Results indicate that farmers likely to be aware of EQIP and eventually adopt BMPs under the program were mainly those who had been in contact with NRCS officials.

**TITLE: Issues in Nutrition and Produce Consumption** (Moderator: Tong Zhang, Oklahoma State University).

**Modeling Fresh Organic Produce Consumption: A Generalized Double-Hurdle Model Approach.** *Feng Zhang and Chung L. Huang, University of Georgia and Biing-Hwan Lin, U.S. Department of Agriculture.*

Using actual retail data, this study is intended to profile consumers' social economic characteristics related to the growth of the fresh organic produce market with a generalized double-hurdle model. The nested test shows that this model performs significantly better than Cragg's independent double-hurdle model and Tobit model.

**Derived Demand for Food Nutrients as a Welfare Indicator of Biofortified Crops: High-Iron Rice in the Philippines.** *Josyline C. Javelosa, Charles B. Moss, Andrew Schmitz, and James L. Seale, Jr., University of Florida.*

The study estimates potential consumer gains from the introduction of high-iron rice in the Philippines. By deriving the demand for dietary iron from a national survey on household food consumption and expenditure, we project consumer welfare implications under both nonmarket and market analytical frameworks.

**TITLE: Farm Bill, Government Program, and Policy** (Moderator: XiaoHui Deng, California State University, Fresno).

**Dynamic Analysis and Forecasts of Rough Rice Price under Government Price Support Program: An Application of Bayesian VAR.** *Sung C. No, Southern University and A&M, and Michael E. Salassi, Louisiana State University.*

This study constructs a Bayesian VAR model of U.S. rice prices, in conjunction with supply and demand functions. Various validation tests are conducted to examine whether the BVAR model satisfies its dual functionality: Providing a dynamic analysis of the effects of a price support program and generating reasonable short-term rice price forecasts.

**Perception of Decoupled Government Payments: Evidence from a National Survey.** *Fariz A. Ahmadov, University of Georgia, Ashok K. Mishra, Economic Research Service/USDA, and Barry J. Barnett, University of Georgia.*

Based on results from a national survey, this study examines how farm households say that they used (or would use) government transfers distributed in the form of direct fixed payments. In addition, the study examines what factors best explain farm household decisions regarding how fixed payment proceeds are used.

**The Impact of Increased Planting Flexibility on Planting Decisions across Texas.** *J. Marc Raulston, Joe L. Outlaw, James W. Richardson, and George M. Knappek, Texas A&M University.*

Increased acreage planting flexibility granted through the last three farm bills has allowed agricultural producers to make production choices without government programs driving their decisions. Planted acre data for program crops in seven Texas regions are used to describe response to varying degrees of flexibility granted through decoupled payments.

**TITLE: Analysis of Animal Production Decision** (Moderator: Robert H. Beach, Research Triangle Institute).

**Considerations in the Dairy Relocation Decision.** *Brian K Herbst, Joe L. Outlaw, David P. Anderson, and Henry L. Bryant, Texas A&M University.*

Historically, U.S. dairymen have been thought to move to a new location to seek better economic opportunities or to leave an area that has become disadvantaged because of regulation or economics. Recently, there have been major shifts in dairy production across the United States again.

**Live Animal Ultrasound Information as a Decision Tool in Replacement Beef Heifer Programs.** *Alecsandro Dos Santos, John D. Anderson, Rhonda Vann, and Scott Willard, Mississippi State University.*

Ultrasound data are used to sort heifers for immediate sale or for development as replacement stock. While ultrasound improves predictions about conception, the value of ultrasound data is relatively small. This value is primarily influenced by heifer development costs and bred heifer premiums over commercial feeder heifers.

**TITLE: Willingness to Pay** (Moderator: Harjanto Djunaidi, Middle Tennessee State University).

**Heterogeneity in Producer's Marketing Strategy.** *Tong Zhang and B.W. Brorsen, Oklahoma State University.*

Producers can make their market timing decisions either based on fundamental or technical analysis to reach a specific financial target. A generalized mixture model is used to discriminate producers into more than one segment according to their marketing strategies. The heterogeneous selling response is the same within each segment.

**Strategic Alliances in U.S. Branded Beef**

**Programs.** *Steve W. Martinez, Economic Research Service, U.S. Department of Agriculture, Roger Hanagriff, Sam Houston State University, and Kevin E. Smith, Packers and Stockyards, U.S. Department of Agriculture.*

In this paper, we combine concepts from organizational economics to examine supply chain alliances formed to market branded beef products. To illustrate applications of the framework, we examine three different types of alliances. We conclude that measuring costs associated with quality attributes have an important role in alliance structure.

**TITLE: Issues in Farm Finance: Augmenting Household Income, Credit Quality Measurement, and Loan Default Prediction** (Moderator: Erda Wang, Tarleton State University).

**Credit Quality of Kansas Farms.** *Allen M. Featherstone and Michael R. Langemeier, Kansas State University, and Kent J. Haverkamp, CoBank.*

This paper examines credit migration of individual Kansas farms from 1980–2003. These farms had an average credit rating equivalent to a Standard and Poor's B classification. Farms in consecutive periods showed the largest tendency to remain in the same ratings category, with smaller tendencies to increase or decrease in credit quality.

**Predicting Credit Default in an Agricultural Bank: Methods and Issues.** *Oluwarotimi O. Odeh, Allen M. Featherstone, and Das Sanjoy, Kansas State University.*

This study examines the performance of logistic regression, artificial neural networks, and adaptive neuron-fuzzy inference systems in predicting credit default using data from the Farm Credit System. Empirical findings show that credit default predictions vary with the empirical model used.

**TITLE: Information, Tourism, and Value**

**Added Agriculture** (Moderator: James N. Barnes, Louisiana State University).

**Running to Stand Still: How Litigation Has Emphasized Challenges Economists Face in the Absence of Data.** *Nathan P. Kemper, Jenie S. Popp, Wayne P. Miller, and H.L. Goodwin, Jr., University of Arkansas.*

Some suggest that land application of phosphorus-rich poultry litter has negatively affected the recreational value of the area's water. However, key data are unavailable to conduct thorough economic analysis to aid in policy development. This paper examines the challenges associated with using limited economic analyses to construct policy to address this situation.

**An Empirical Analysis of County-Level Determinants of Small Business Growth Poverty in Appalachia: A Spatial Simultaneous-Equations Approach.** *Gebremeskel H. Gebremariam, Tesfa G. Gebremedhin, and Peter V. Schaeffer, West Virginia University.*

In this paper we develop an autoregressive spatial simultaneous equations model to investigate the county-level determinants of small business growth and median household income in Appalachia during the period 1990–2000. Our GS2SLS and GS3SLS estimation results indicate significant spatial spillover effects and conditional convergence in counties of Appalachia during the study period.

**TITLE: Precision Agriculture** (Moderator: Shankar Devkota, Oklahoma State University).

**Yield Monitor Adoption and Information Use by U.S. Soybean Producers.** *Stan Daberkow and Jorge Fernandez-Cornejo, Economic Research Service, U.S. Department of Agriculture, Washington, DC.*

The extent of adoption of information technologies, such as yield monitors, has implications for farm income and the quality of agricultural land and water resources. A

sequential probit model was used to quantify the farm and operator characteristics that influence the interrelated decision to adopt yield monitors and georeference yield monitor data on U.S. farms producing soybeans.

**Field-Scale Experimental Designs and Spatial Econometric Methods for Precision Farming: Strip-Trial Designs for Rice Production Decision Making.** *Terry W. Griffin, Raymond J.G.M. Florax, and Jess Lowenberg-DeBoer, Purdue University.*

Site-specific data is spatially variable, precluding traditional econometric analysis. Some field-scale experimental designs present logistical, operational, and mathematical problems in estimating treatment differences, specifically when adjacent observations are of different treatments such as with strip-trial designs. A modified spatial interaction structure is presented to analyze strip-trial designs with spatial econometrics.

**TITLE: Partial and General Equilibrium Analysis of Agricultural Commodities** (Moderator: Sung Chul No, Southern University and A&M).

**Sensitive Product Designation in the Doha Round: The Case of Rice.** *Alvaro Durand-Morat, University of Arkansas, and Eric Wai-les, University of Arkansas.*

Effects of sensitive product designation in WTO trade reform on the international rice market are analyzed. General and partial equilibrium frameworks are used. Results suggest large impacts. Among exporters, China and the United States, major suppliers of the Japanese and South Korean markets, are most negatively affected.

**TITLE: Broiler Production and Waste** (Moderator: Sherry Larkin, University of Florida).

**Assessing the Feasibility of Broiler Manure Transportation and Application in Crop Production under Environmental Restriction-**

**ions.** *Keshav Bhattarai, Central Missouri State University, and Krishna P. Paudel, Louisiana State University.*

This study combines survey information and the GIS based optimization model to identify the optimal distribution of broiler litter in crop production. The results obtained provide more plausible transportation routes than the method that does not utilize all these constraints.

**TITLE: Farm Level Agronomic Analysis** (Moderator: Phillip R. Eberle, Southern Illinois University).

**Herbicide Application Rates: Risk Premiums with Environmental Implications.** *Raymond E. Massey, University of Missouri.*

This paper examines the role of risk aversion in setting herbicide label rates and application rates. Companies establish label rates to be efficacious for a wide range of conditions. The use of reduced rates of herbicide offers the opportunity to increase farm profit and reduce herbicide use, an environmental benefit.

**Adoption of Conservation-Tillage Methods and Genetically Modified Cotton.** *Roland K. Roberts and Burton C. English, University of Tennessee, Qi Gao, Texas A&M University, and James A. Larson, University of Tennessee.*

Adoption of herbicide-resistant cotton and conservation tillage may be simultaneously related. Bayes's theorem and a two-equation logit model were used to test the simultaneity hypothesis. Evidence for Tennessee suggests that adoption of these technologies reduced residual herbicide use and soil erosion more than if adoption of these technologies were independent.

**A Farm-Level Approach to the Methyl Bromide Phase-out: Identifying Alternatives and Maximizing Net Worth Using Stochastic Dominance and Optimization Procedures.** *Mark M. Byrd, Cesar L. Escalante, Mi-*

*chael E. Wetzstein, and Esendugue G. Fonsah, University of Georgia.*

Alternative fumigant and herbicide systems for Georgia's pepper farms are analyzed relative to soon-to-be phased-out methyl bromide system. Stochastic dominance analyses identify two alternatives exceeding MeBr's yield and financial efficiency. A programming model using simulation–optimization techniques provides important implications on the pepper farms' economic viability under these alternative systems.

**TITLE: Government Policy Effectiveness and Its Impact** (Moderator: Albert Allen, Mississippi State University).

**Analyzing Arkansas' Economic Growth: Need for Future Rural Development Strategies.** *Biswaranjan Das and Daniel V. Rainey, University of Arkansas.*

A shift-share analysis was conducted for the 75 counties of Arkansas to determine the changing structure of the state's economy for the period 1980–2000. The analysis reveals a lack of overall comparative advantage in the majority of rural counties due to their inability to obtain higher paying jobs in manufacturing and professional sectors.

**TITLE: Weather, Land Value, and Conjoint Analysis** (Moderator: Roger A. Hinson, Louisiana State University).

**Prediction of Weather-Event Associated Crop Yield Losses in Kansas.** *Erda Wang, Tarleton State University, Jimmy B. Williams, Blackland Research and Extension Center, Texas A&M University, and Bertis B. Little, Tarleton State University.*

The environmental policy integrated climate (EPIC) model was modified to include hail weather events, completing modification needed to simulate the four most frequent causes of crop yield loss (hail, too wet, too cold, too dry) in the Kansas crop insurance

program. Yields were simulated for corn, wheat, soybeans, and sorghum.

**Causes and Trends of Land Conversion: A Study of Urbanization in North Alabama.** *Maribel N. Mojica and James O. Bukonya, Alabama A&M University.*

Alabama is experiencing significant pressure to convert agricultural land to urban uses. The dominant pattern of urbanization has been the conversion of agricultural land to residential and commercial uses. This paper examined regional, state, and local land use trends and developed a tool for identifying the determinants and impacts of past and proposed land use change in north Alabama using selected cities and towns in Madison County.

**TITLE: Market Structure Analysis across Countries** (Moderator: P. Lynn Kennedy, Louisiana State University).

**Who Dominates Market Power for U.S.–China Soybean Trade?** *Baohui Song, University of Kentucky, Mary A. Marchant and Shuang Xu, University of Kentucky.*

Knowing who dominates market power for U.S.–China soybean trade is of interest to both countries. This research develops a two-country partial equilibrium trade model to test the market power of soybean traders of the two countries. Results show that China's soybean importers have stronger market power than U.S. soybean exporters.

**Measuring the Degree of Monopsony Power in the EU Fish Importing Industry: Implications for Ugandan Fresh and Chilled Fish Fillet Exports.** *Andrew Muhammad, Southern A&M University.*

Although France, Belgium, and the Netherlands import a significant percentage of chilled fish fillet from Uganda, results suggest no significant degree of monopsony power is exercised by these countries. If Ugandan firms export to a few countries, the competitive

price should still prevail if there are many importing firms.

**The International Location of Pork Production.** *Hongsin Park, Ozgur Kaya, and Lowell Gunter, University of Georgia.*

Efficient hog production technologies, which have cost advantages for international competition, also have environmental disadvantages that may affect the location of facilities using this technology. This paper presents an econometric analysis of the impact of country characteristics on the growth of pork production in major producing countries over the period 1985–2003.

**TITLE: Environmental Valuation and Policy** (Moderator: J. Fernandez-Cornejo, ERS–USDA).

**The Role of Local Policies on Resource Utilization: Timber Harvesting in St. Tammany Parish, Louisiana.** *James E. Henderson, Tina M. Willson, Michael A. Dunn, and Richard F. Kazmierczak, Jr., Louisiana State University.*

Seemingly unrelated regression was used to investigate if the passage of forestry-related ordinances has had an effect upon timber harvesting activities in St. Tammany Parish, Louisiana. Results indicate that a significant negative relationship exists between a \$10,000 road bond ordinance and the level of timber harvest in the Parish.

**The Impacts of Alternative Institutions on Distributional and Environmental Efficiency of Environmental Programs.** *Virginia Buller and Darren Hudson, Mississippi State University.*

Experimental auctions are used to examine the impacts of alternative constraints on environmental programs. Results show that use of a monetary constraint results in greater environmental efficiency at a lower total cost as compared to an acreage.

**Use of Bootstrap Method to Obtain Reliable Parameter Estimations on a Travel Cost Demand Model.** *Nirmala Devkota, Krishna P. Paudel, Larry Hall, and Rex H. Caffey, Louisiana State University.*

We used Poisson and negative binomial models to estimate future demand of recreation trips to a closed site using Internet and intercept surveys. Parameter estimates were validated using 1,000 bootstrap replications. Results indicated a significant negative impact of travel time and positive impact of income on the future recreational demand.

**A Double-Hurdle Model of Preferences for a Proposed Capacity Reduction Program in the Atlantic Shark Fishery.** *Jessica D. Musesengezi, Frederick J. Rossi, and Sherry L. Larkin, University of Florida.*

The Atlantic shark fishery is considered to be overcapitalized. One approach to capacity management is the purchase and permanent retirement of fishing vessels, fishing permits, or both under voluntary buyback programs. Representatives of the commercial shark fishery have proposed such an approach to manage the overcapacity in their fishery in the Gulf of Mexico and Atlantic regions. This program would allow owners to submit willingness-to-accept (WTA) bids for their permits and vessels. This study uses econometric modeling to explain the potential participation and bid amounts from a survey of permit owners.

**TITLE: Food Safety and Quality** (Moderator: Sherry L. Larkin, University of Florida).

**Consumer Valuation of the Second Generation of Genetically Modified (GM) Foods with Benefits Disclosure.** *Jae-Hwan Han and R. Wes Harrison, Louisiana State University.*

Employing contingent valuation method (CVM), the study explores whether consumers' risk–benefit beliefs and knowledge about GM foods affect their behavior as measured by willingness to pay (WTP) a premium for GM beef with benefits. The results demon-

strate that risk–benefit perceptions play a significant role to elicit WTP for GM beef with benefits.

**Household Perceptions of the Quality of Drinking Water in Uganda.** *James O. Bukenya, Alabama A&M University.*

The paper analyzed self-reported household water quality opinions and avoidance measures used by households in Uganda to manage health risks. The data were collected from four divisions in the Kampala district and analyzed using a simultaneous probit equation system. Probit results confirmed the existence of strong relationships between household characteristics, opinions on water quality, and the use of avoidance measures.

**TITLE: Crop Insurance, Farm Workers, and Farm Size** (Moderator: H.L. Goodwin, University of Arkansas).

**The U.S. Farm Labor Market Post-IRCA: An Assessment of Employment Patterns, Farm Worker Earnings, and Legal Status.** *Lurleen M. Walters, University of Florida, Orachos Napasintuwong, Kasetsart University, Nobuyuki Iwai and Robert D. Emerson, University of Florida.*

Immigration reform may significantly impact the specialty crops sector because more than half of the workforce is foreign-born and undocumented. Based on data from the National Agricultural Workers Survey, the trends pertaining to workers' legal status, employment, and wage rates in the U.S. and Florida farm labor markets are examined.

**TITLE: Competitive Advantage, Marketing Strategies, and Economics Analysis** (Moderator: Tong Zhang, Oklahoma State University).

**The “Phantom Costs” of Florida’s Citrus Industry.** *Ronald P. Muraro, Fritz M. Roka, and Thomas H. Spreen, University of Florida.*

Regulatory compliance, the “phantom

costs of production,” is an increasing “fact-of-life” for U.S. agriculture. A survey was developed and implemented to enumerate regulatory compliance costs for Florida’s 748,500-acre citrus industry. Complying with 61 production related regulations, 643,757 hours were expended at a total annual cost of over \$24.3 million.

**The Viability of a Crop Insurance Investment Account: The Case for Obion County, Tennessee.** *Delton C. Gerloff, University of Tennessee.*

This paper evaluates the feasibility of farmer-owned crop insurance accounts. The accounts, similar to retirement accounts, accumulate presubsidy premiums and dispense indemnities. Government involvement is that of guaranteeing loans if indemnities exceed the account balance. Substantial government savings occur through insurance premium subsidy elimination.

**TITLE: Farm Production Efficiency** (Moderator: Francis M. Epplin, Oklahoma State University).

**Optimal Irrigation Schedules and Estimation of Corn Yield under Varying Well Capacities and Soil Moisture Levels in Western Kansas.** *Sreedhar Upendram and Jeffrey Peterson.*

Irrigation scheduling helps in maintaining optimal soil moisture and conserving water. In this paper, we simulate corn yields for alternative irrigation schedules under varying well capacities and soil moisture levels. The simulated yields are then used to generate probability distributions of net returns, which are evaluated using stochastic dominance.

**TITLE: Policy Analysis and Current Issues** (Moderator: Robert Beach, Research Triangle International).

**How Will Tobacco Farmers Respond to the Quota Buyout? Findings from a Survey of North Carolina Tobacco Farmers.** *Robert*



*H. Beach, RTI International, David W. Richmond, Wake Forest University School of Medicine, W. David Austin, RTI International, and Alison Snow Jones, Wake Forest University School of Medicine.*

The tobacco quota buyout is expected to have significant impacts on U.S. tobacco markets, farmers, tobacco-dependent communities, and public health. Using data from four surveys of a panel of North Carolina tobacco farmers conducted between 1997 and 2004, we investigate changing farmer attitudes toward and intentions following a quota buyout.

**Who Is Willing to Pay to Keep Livestock Production Away?** *Phillip R. Eberle, C. Matthew Rendleman, and William C. Peterson, Southern Illinois University Carbondale.*

Residents have opposed location of nearby livestock facilities. Illinois residents were asked how much they would be willing to pay (WTP) to stop a dairy from locating near them. Most respondents would not pay. Demographic characteristics (income, education, age, gender, agricultural interest, activism, etc.) were used to evaluate respondents WTP.

**Economic Optimization of Groundwater Resources in the Texas Panhandle.** *Lal K. Almas and W. Arden Colette, West Texas A&M University, and Seong C. Park, Oklahoma State University.*

Economic optimization models for 23 counties in the Texas Panhandle are developed to maximize the net income from crop production using groundwater resources. Total water use declines from 2.16 to 0.63 million acre-ft. The models can serve as policy tools to assess socioeconomic impacts of management strategies to prolong the useful life of the Ogallala Aquifer.

**TITLE: Agribusiness, Food Security, and Rural Community** (Moderator: Daniel V. Rainey, University of Arkansas).

**Innovation and Entrepreneurship in Rural**

**Communities: Early Business Survival Challenges for the Agribusiness Entrepreneur.** *Cesar L. Escalante, University of Georgia, and Calum G. Turvey, Cornell University.*

Barriers and strategies for survival of agribusiness and nonagribusiness entrepreneurs during early business stages are analyzed under the case-study approach. Results confirm qualitative differences in start-up conditions, such as skill and execution deficiencies, market structure, and resource endowments. Moreover, agribusiness entrepreneurs tend to adopt different strategies to address similar barriers faced by nonagribusiness entrepreneurs.

**TITLE: Market Structure and Access in the Wine, Produce, and Livestock Industries** (Moderator: Y. Kunimitsu, National Institute for Rural Engineering, Tsukuba, Japan).

**Industry Concentration Impacts on Business Strategies Used by Small Produce Wholesalers.** *Roger A. Hinson and Ramona Sinoha, Louisiana State University, and Dixie Watts Reaves, Virginia Tech.*

Opportunities for small produce wholesalers are affected by concentration in the supply chain, and availability and use of information technology for cost and service issues. Case studies evaluated perceptions, technology adoption and use, and strategies. Ongoing relationships, contracts, and bids were common, and a differentiation strategy was chosen.

**Modeling Live Cattle Supply with Different Price Expectations.** *Feng Zhang, James E. Epperson, and Jack E. Houston, University of Georgia.*

Using live cattle production data from 1995 to 2001, we investigated live cattle supply represented by both net placement and marketing with two price expectation models, naïve, and futures. The results show significant evidence of different price expectations when cattle feeders make decisions on both measures of live cattle supply.

**Meat Processing in North America: Successes, Failures, and Opportunities.** *Vahid Omidvar, Derek G. Brewin, and Jared G. Carlberg, University of Manitoba.*

This paper analyzes historical successes and failures in meat processing using a case study methodology, especially as it relates to possible changes in Canadian market access. Cases include: IPB and economies of size; Canada Packers labor failures; and Tyson and Certified Angus branding strategies.

**TITLE: Market Planning and Analysis** (Moderator: Steve Martinez, ERS–USDA).

**Price Transparency in the Voluntary Price Reporting System for Live Cattle: Theory and Empirical Evidence.** *Scott W. Faust, Bashir A. Qasmi, and Matt A. Diersen, South Dakota State University.*

Interregional spatial linkages between South Dakota and Nebraska cash markets for slaughter cattle are investigated. Econometric procedures are used to test whether a thinning market effect or strategic price reporting behavior by packers has degraded market transparency under the voluntary price reporting system. Empirical evidence suggests transparency was not degraded.

**Estimating the Value Added Product Life Cycle.** *Haluk Gedikoglu, Joe L. Parcell, David J. Patterson, and Richard Randle, University of Missouri.*

This research analyzes factors affecting product and profit life cycles for new value added products. The methodology used shows how sales and profits evolve and how exogenous factors affect sales and profits. Results indicate that producers can increase the level of sales and profits over time through initial marketing efforts.

**TITLE: Agricultural Prices** (Moderator: Stan Daberkow, ERS–USDA).

**Geographic and Seasonal Differences in**

**Feeder Cattle Hedging Risk.** *William K. Brake and John D. Anderson, Agricultural Economics, Mississippi State University, and Brian K. Coffey, Kansas State University.*

Optimal hedge ratios on feeder steers for four different locations are estimated. Simulated hedging outcomes are evaluated to determine differences in hedging risk across locations. Results indicate that location explains little of the differences in risk, though hedging risk in Georgia is greater on March and November contracts than in other locations considered.

**Comparing the Risks and Returns of Alternative Price Risk Management Strategies for Southeastern Feeder Cattle Production.** *Matias G. Nardi and Todd D. Davis, Clemson University, Curt Lacy, University of Georgia, J. Walter Prevatt, Auburn University, and Timothy D. Hewitt, University of Florida.*

A nonparametric simulation model incorporating price risk determined gross revenue less risk management costs for cow–calf, winter stockering, and retained ownership scenarios for cattle producers in the Southeast. Risk management scenarios simulated hedging with commodity futures and purchasing at-the-money put options at alternative dates prior to the expected sales date.

**TITLE: Forestry: Climatic Effects and Carbon Sequestration Moderator** (Moderator: Brandon Davis, Mississippi State University).

**The Optimal Single Forest Rotation under Climatic Fluctuation Effect.** *Haili Jia, University of Kentucky.*

The stochastic impact of the “climatic fluctuation effect” is introduced in the traditional determinant timber growth model and optimal harvesting strategies are derived under different stochastic “climatic fluctuation effect” patterns. Results show that properties of different patterns significantly affect the forms of the optimal harvesting rules.

**Potential Carbon Sequestration and Revenue from Timber and Carbon Credits for Landowners of West Virginia Abandoned Mine Lands.** *Christopher Bouquot and Mark Sperow, West Virginia University.*

An optimal forest rotation model estimates potential value from timber and carbon for owners of West Virginia abandoned mine lands (AMLs). An OLS regression provides merchantable volume and carbon density for six forest types which could sequester 0.41 Tg of carbon per year on approximately 33,800 hectares of AMLs.

**A Risk Analysis of Carbon Sequestration in Claypan Soil with Conservation Tillage Systems and Nitrogen Fertilizers for Grain Sorghum and Soybean.** *Jeffery R. Williams, Dustin L. Pendell, Daniel W. Sweeney, Charles W. Rice, and Richard G. Nelson, Kansas State University.*

We evaluated the economic feasibility of using conservation tillage rather than conventional tillage to sequester carbon with the use of alternative nitrogen fertilizer sources for a grain sorghum–soybean rotation. Results indicate which system provides the highest net returns, which system is preferred by risk-averse managers, and the price of carbon credits required for management system adoption under alternative risk aversion preferences.

**TITLE: Livestock Economics** (Moderator: James Trapp, Oklahoma State University).

**Factors Influencing the Adoption of Russian *Varroa*-Resistant Honey Bees.** *Seon-Ae Kim, John V. Westra, and Jeffrey M. Gillespie, Louisiana State University.*

Factors influencing the adoption of Russian *Varroa*-resistant honey bees were assessed. Logit results indicate factors associated with the adoption include sales, Internet use, and contact with other beekeepers. Negatively associated factors are age and income. Future adoption depends upon previous use and perception.

**Financial Impacts of Regional Differences in Beef Cattle Production.** *James D. Sartwelle, III, Joe L. Outlaw, and James W. Richardson, Texas A&M University.*

The sensitivity of net cash farm income to changes in selected production variables, output prices, and input costs varies significantly across representative U.S. beef cattle operations. Larger changes in profitability result from changes in productivity and output prices than from changes in input costs.

**Economic Returns to Different Stocking Rates for Cattle on Ryegrass under Contract Grazing and Traditional Ownership.** *Jose-Luis Zaragoza-Ramire, Chapingo University, David Bransby and Patricia A. Duffy, Auburn University.*

Economic returns to stocker production were estimated using results of a grazing experiment. If resources to buy cattle are not limited, traditional ownership was superior to contract grazing under all but extremely unfavorable price spreads. If capital to purchase stockers is limited, contract grazing may provide more returns.

**Willingness to Participate in Dairy Programs to Reduce Manure Related Problems in Louisiana's Major Dairy Production Region.** *Krishna P. Paudel, Wayne M. Gauthier, Larry M. Hall, and John V. Westra, Louisiana State University.*

Logistic and tobit models were used to understand the factors affecting dairy program participation and stated bid values by respondents. Results indicated that past participation is the key variable in regression. Bootstrap result confirms that most of the estimated parameters fall within the range of the bootstrap confidence interval.

**TITLE: Ethanol, Economic and Cost Analysis** (Moderator: K.P. Paudel, Louisiana State University).

**Engineering Cost Analysis of a Dairy An-**

**aerobic Digestive System: A Real Option Approach.** *Brandon Davis, Mississippi State University.*

In many areas of the United States, dairy farmers are facing lawsuits due to externalities caused by confined animal feeding operations. Consequently, producers are installing anaerobic digestive systems to reduce pollution. The purpose of this study is determining the future value of an anaerobic digestive system by analyzing the joint probability of being sued and losing a litigation case.

**TITLE: Fuel, Transportation Efficiency, and Agribusiness** (Moderator: Joe Outlaw, Texas A&M University).

**Impact of Entry and Exit on Agribusiness-Trucking Industry Efficiency: Stochastic Frontier Analysis.** *Albert J. Allen and Saleem Shaik, Mississippi State University.*

In this paper, the impact of entry and exit of firms on the overall efficiency of the industry is examined in the efficiency framework, using agribusiness-trucking firms for the period 1994–2003. Specifically, industry efficiency is compared with and without firms that enter and exit using panel stochastic frontier analysis.

**Impact of September 11, 2001, on the Profitability Performance of the U.S. Trucking Industry.** *Safdar Muhammad, Tennessee State University, Albert J. Allen, and Saleem Shaik, Mississippi State University.*

Using an econometric model, we examined the economic impact of the September 11, 2001 (9/11) terrorists attacks on the U.S. homeland on the trucking transportation sector in the United States. Also, the econometric model was modified to show how this event may have inflicted economic damage on the industry by regions.

**The Effect of Ethanol Production on Agricultural Production in the State of Alabama.** *Ellene Kebede, Tuskegee University,*

*Patricia A. Duffy, Auburn University, and Robert Zabawa, Tuskegee University.*

This research assessed the economic effect of corn-based fuel ethanol production on agriculture and the state economy in Alabama. The results showed that in the short run a 15 million gallon per year plant will be profitable. This will have farm income and a multiplier effect in the rest of the state economy.

**TITLE: Farm Programs and Current Issues** (Moderator: Francis Epplin, Oklahoma State University).

**An Optimization Model for Winery Capacity Use.** *Christos Kolympiris, University of Missouri, Michael R. Thomsen and Justin R. Morris, University of Arkansas.*

An optimization model to sequence wine flow through the production process is developed. The model is formulated as a mixed integer program and accounts for winemaking specifications, market conditions, grape availability, and tank capacity. An empirical example is provided to demonstrate results and uses of the model.

**TITLE: Issues in Meat Demand** (Moderator: B. Wade Brorsen, Oklahoma State University).

**A Dynamic Approach to Estimate Theoretically Consistent U.S. Meat Demand System.** *Anil K. Sulgham and Hector O. Zapata, Louisiana State University.*

The paper conducts an empirical investigation of the U.S. meat demand system using quarterly data on per capita meat consumption and prices. SUR maximum likelihood is used to estimate a static and dynamic (error correction) linear almost-ideal demand systems. Results compare static and dynamic model elasticities.

**Testing Separability between Import and Domestic Commodities: Application to U.S. Meat Demand in a Dynamic Model.** *Tullaya*

*Boonsaeng and Michael K. Wohlgenant, North Carolina State University.*

The results indicate that a dynamic specification of the AIDS model is superior to the static AIDS model. The separability test for both the static and dynamic AIDS models conclude that imported meat consumption is non-separable from the U.S. consumption so domestic meat should be included in the analysis of U.S. import meat demand.

**Value Added to the Beef Cattle Chain through Genetic Management.** *Jessica Robertson and Joe Parcell, University of Missouri.*

Genetics have a direct impact on the carcass quality of an animal. The objective of the study is to determine whether managing genetics has an impact on quality of beef carcasses. Genetic management was found to have a positive impact on quality grade and no impact on yield grade.

**TITLE: Water Quality, Use and Policy** (Moderator: Harjanto Djunaedi, Middle Tennessee State University).

**Cost-Effectiveness of Alternative Environmental Policies for Reducing Nonpoint Source Pollution in Public Water Supplies.** *Edouard K. Mafoua and Robert H. Hornbakker.*

This study predicts farmers' response to policy alternatives aimed at alleviating non-point source pollution problems in a municipal water supply in Pike County, Illinois. The framework integrated simulation models with optimization models of the watershed to assess environmental policies. Results show how farmers are likely to alter agricultural management practices.

**Effect of Water Price on the Multicrop Production Decision: Applying the Fixed Allocatable Input Model in Georgia.** *Yingzhuo Yu, Jeffrey D. Mullen, and Gerrit Hoogenboom, University of Georgia.*

This study applies the fixed allocatable input model to test the effect of water price on the multiple production decision in Georgia, U.S.A. The limited dependent variable models are applied, and intensive data are analyzed in this study to estimate the decision for crop choice, land allocation, product supply, and water demand functions at crop level. To investigate the effect of water price on crop-level demand, we decomposed the total water price effect on farm water demand into the intensive margin and extensive margin.

**Policy Alternatives for the Southern Ogallala Aquifer.** *Erin A. Wheeler, Eduardo Segarra, Phillip N. Johnson, Jeffrey W. Johnson, and David B. Willis, Texas Tech University.*

Because of declining water levels in the Ogallala Aquifer, policy alternatives for extending the life of the aquifer for irrigation and other purposes are evaluated. The study concludes that blanket water conservation policies for the region are likely to be inefficient because of economic and hydrologic differences in the region.

**Effect of Water Price on the Multicrop Production Decision: A Fixed Allocatable Input Model for Georgia.** *Yingzhuo Yu and Jeffrey D. Mullen, University of Georgia, Sarah Deng, University of California, and Gerrit Hoogenboom, University of Georgia.*

A fixed allocatable input model is estimated to examine the effect of water price on multiple crop production decisions in Georgia. Results indicate water price has a negligible impact on land allocation decisions across crops, but has a significant impact on inter-seasonal water use for peanut and soybean production.

**Combating the Crisis: Managing Watersheds for Economic Profit and Environmental Quality Improvement.** *Germán Rodríguez and Jennie Popp, University of Arkansas.*

Phosphorus runoff has generated water

quality degradation, spawning legislative and regularity actions in several watersheds in northwest Arkansas. Best management practices (BMPs) can be viable alternatives in dealing with nutrient excess. The effectiveness of several BMPs in addressing such concerns is examined in one northwest Arkansas watershed.

**TITLE: Teaching and Research Agenda** (Moderator: Joseph Mehlhorn, University of Tennessee, Martin).

**Quizbowl: Success In and Out of the Classroom, a Five Year Study.** *Jennie Popp and German Rodriguez, University of Arkansas.*

Scores of U.S. and Canadian university undergraduate students participate in the SS-AAEA Quizbowl competition annually. Surveys of the 2001 through 2005 competition participants suggest how beneficial competition preparation and participation are in completing related university work and indicate factors that enhance chances of success in the competition.

**Agricultural Health and Safety: A Research**

**Agenda for Agricultural Economists.** *Ross M. Key, CFR Consulting, Robert O. Burton, Jr., and Allen M. Featherstone, Kansas State University.*

Agriculture is a hazardous profession with high rates of work-related injury and illness. Although economists have addressed these issues in general, there is need for additional economic analysis. Using prostate cancer as an example, this paper discusses economic research needed to analyze and understand agricultural health and safety issues.

**Do We Prepare Our Students Well for the Job Markets?** *Tim Redd and Harjanto Djunaidi, Middle Tennessee State University.*

Concerns are raised by students and parents whether agriculture economics or agribusiness courses taught at the College of Agriculture help the students to find appropriate jobs after graduation. From the educators' or administrators' point of view, the students' ability to meet job requirements is crucial because it reflects how well students have been prepared for their careers.