Posters

Annual Meetings, SAEA, Little Rock, Arkansas, February 1998

Poster Awards

First Place: Two Methods of Measuring Consumers' Willingness to Pay for a Safer Meat Sandwich. *Martin Redfern, William C. Bailey, and John N. Giamalva, Univ. of Ark.*

Second Place: The Dynamics of U.S. Catfish Supply Response. *Richard F. Kazmierczak, Jr., and Ferdinand F. Wirth, III, La. State Univ.*

Third Place: Impact of a Substantial Price Shock on the World and U.S. Rice Markets: Results from the Arkansas Global Rice Model. *Gail L. Cramer, Eric J. Wailes, Eddie C. Chavez, and Karen J. Strain, Univ. of Ark.*

TITLE: Agribusiness

Determination of the Optimal Level of Lint Cleanings for Irrigated Cotton. *Blake K. Bennett and Sukant K. Misra, Tex. Tech Univ.*

This analysis simulates net returns for stripper-harvested cotton to determine the optimum level of lint cleaning in the gin. Results indicate that one lint cleaning maximizes producer net returns with relatively low quality price premiums. Similarly, lower levels of lint cleaning are optimal for lower turnout and early harvested cotton. However, two and three lint cleanings maximize net returns for higher price premiums, higher turnout cultivars, and late harvested cotton. Based on simulation results, the study develops a predictive equation to determine optimal levels of lint cleaning for alternative base prices, premiums and discounts, turnouts, and times of harvest.

Analysis of Demographic and Socioeconomic Factors Affecting Meal Preparation in Bulgaria. *W. Florkowski, W. Moon, A. Ressureccion, J. Jordanov, P. Paraskova, L. Beuchat, K. Murgov, and M. Chinnan, Univ. of Ga.*

Household production theory suggests that time is one of the inputs used to produce final goods (e.g., cooked meals) in the households. This study hypothesizes that time allocated to meal preparation is an endogenous variable to be determined by the demographic, socioeconomic, and other characteristics of the households. Using consumer survey data collected in Bulgaria, the study analyzes the impacts of the aforementioned variables on the decision of how much time to allocate to meal preparation. The empirical results could provide insights about the preference for processed food products compared to traditional agricultural products.

Feasibility of Increasing Wheat Processing Capacity in Oklahoma. *Gelson Tembo and Phil Kenkel, Okla. State Univ.*

Oklahoma exports 80% of its total wheat production as grain. The recent migration of food processing companies into Oklahoma has increased wheat producers' interest in developing additional flour mills within the state. This study examines the feasibility of expanding flour-based value-added activities. An economic engineering-based, cost-minimization model is used to determine the optimal num-

ber, size, and location of flour mills. The results suggest that there is limited potential for additional hard-red winter wheat flour milling. However, a substantial soft-red winter wheat milling industry could be developed if wheat producers would be willing to shift into soft wheat.

TITLE: Extension

Use and Distribution of Computer-Based Information by Cooperative Extension Agents. *Weylin Lucius and Phil Kenkel, Okla. State Univ.*

Agriculture lags in its acceptance and adoption of computer-based information. Timely information is an important aspect of decision making. Surveys were taken of Cooperative Extension agents to ascertain their awareness and interest in Mesonet, a new weather information system, as well as their employment of other computer-based technologies. Results show that extension agents are aware of the benefits of the Mesonet technology, but lack the time, computer skills, or equipment necessary to adopt Mesonet and similar computer information services.

TITLE: Agricultural Finance

The Regional Impact of Rice Deficiency Payments on the Risk-Return Relationship of Louisiana Producers. *Gary A. Kennedy, La. Tech Univ.; and Steven A. Henning, Lonnie R. Vandeveer, and Hector O. Zapata, La. State Univ.*

Stability in gross farm income resulting from direct government deficiency payments has historically affected the optimum crop mix combination that results in risk-efficient portfolios. The Federal Agriculture Improvement and Reform (FAIR) Act of 1996 mandates the decline and eventual elimination of deficiency payments. This poster illustrates the degree to which deficiency payments affect the risk-return relationship for optimal production mixes of rice and soybeans for small, medium, and large Louisiana farms. Results suggest that the impact of the FAIR Act on the risk-return relationship of Louisiana rice producers is dependent on farm size and production region.

Financial Implications of a New Farm Policy Environment. *Lonnie R. Vandeveer and Steven A. Henning, La. State Univ.; Gary A. Kennedy, La. Tech Univ.; and Chunxiao Li, La. State Univ.*

The 1996 Farm Act dramatically affects the decision-making environment of farms by establishing provisions for reducing farm income support payments. These program changes are expected not only to affect farm incomes, but also farm capital asset markets. The combined effect of these two financial variables can substantially alter the amount of debt that can feasibly be used in a farming operation. These effects are estimated from a hedonic analysis of the capitalized value of farm income support payments and from a financial model that is based on a safety-first decision framework and applied to a representative Louisiana cotton farm.

TITLE: Farm Management and Production Economics

The Dynamics of U.S. Catfish Supply Response. *Richard F. Kazmierczak, Jr., and Ferdinand F. Wirth, III, La. State Univ.*

This study examines the supply dynamics of the U.S. farm-raised catfish industry by decomposing the production process into stages that are determined by technological and biological production decisions. Results indicate that catfish market supply decisions in the short term are affected more by capital-versus-consumption-goods criteria, whereas over the longer term, supply may reflect resource adjustments. The form of these catfish supply dynamics suggests that price and quantity cycles in the industry are unavoidable but predictable, and thus give producers valuable information when making decisions at various stages in the production process.

The New USDA Productivity Indexes: The Case of the Southern States. *Doris Newton and Liana Cuffman, USDA/ERS.*

Total factor productivity (TFP), an important source of economic growth in agriculture, grew at an average annual rate of 1.99% over the 1960–93 period. This aggregate number masks the variation in TFP growth across states. In the South, TFP growth ranges from a low of 1.22% to a high of 2.72% in Oklahoma and North Carolina, respectively. This poster analyzes growth rate trends for TFP, output, and input use for the South for the 1960–93 period.

A Comprehensive Model of Swine Manure Management Systems. *Fenton Wells and Kelly Zering, N.C. State Univ.; Ken Nelson and Teresa Glover, USDA/ERS; and Hallie Northrop, N.C. State Univ.*

One obstacle to more efficient environmental policy and more economical manure management systems is the lack of a standard for evaluating the environmental effects and costs of different treatment systems across various locations, sizes, and types of swine farms. This study presents a spreadsheet which generates estimates of the costs and environmental effects of various swine manure management systems based on local conditions and the interrelated physical flows and cost flows between each component.

TITLE: International Agricultural Economics

Impact of a Substantial Price Shock on the World and U.S. Rice Markets: Results from the Arkansas Global Rice Model. *Gail L. Cramer, Eric J. Wailes, Eddie C. Chavez, and Karen J. Strain, Univ. of Ark.*

The international rice market, being thinly traded, is susceptible to policy or weather related price shocks. This study simulates the impact of a 10% incremental shock in the international rice price in 1998 (year 1) using the Arkansas Global Rice Model. World rice net trade, production, and consumption decline in 1998. Global production increases in year 2, resulting in higher exports and lower prices. The global rice economy recovers from the shock within four years. U.S. rice exports increase and stocks decrease in 1998, resulting in higher farm prices. In year 2, farm price declines as production, exports, and stocks increase.

TITLE: Marketing and Agricultural Prices

A Regression Analysis of Long-Grain Rough Rice Prices and Basis Estimates for Southwest Louisiana. *G. Grant Giesler, Wayne M. Gauthier, and Michael E. Salassi, La. State Univ.*

Auction sale data were analyzed using regression analysis to determine impacts of specific quality attributes and nearby futures on rough rice cash prices. After estimating an equation for each marketing year, appropriate variables were fixed at contract specified levels and, along with the previous days' closing futures, were used to estimate a 55/70 #2 cash price which was used to calculate basis. Results show generally positive basis levels in years when cash prices were relatively stable and above the loan rate. Years with prices at the loan rate or with a high degree of variability exhibited mostly negative basis levels.

Results from a U.S. Multi-Quality Alfalfa Transshipment Model. *Clement Ward, Solomon Kariuki, and Ray Huhnke, Okla. State Univ.*

Alfalfa consumption in each state was estimated for dairy cows, beef cows, feedlot cattle, horses, and sheep. Two qualities of alfalfa were considered: higher quality for dairy cows and lower quality for other livestock species. The least-cost transportation model considered alfalfa exports to Japan and alternative transportation rates to proxy baling and shipping efficiency changes over time. Results show alfalfa exports are satisfied from California, an alfalfa-surplus state. Generally, movement of alfalfa is from surplus states in the West and

upper Midwest to deficit states in the East, South Central, and Southeast.

TITLE: Agricultural and Food Policy

Two Methods of Measuring Consumers' Willingness to Pay for a Safer Meat Sandwich. *Martin Redfern, William C. Bailey, and John N. Giamalva, Univ. of Ark.*

A series of 12 experimental sessions were conducted to determine willingness to pay (WTP) for aspects of food safety. The three products evaluated were: a sandwich which had been stringently screened for bacteria, an organically produced sandwich, and a sandwich which had been irradiated to decrease the risk of foodborne disease. Eighteen months later, the same participants were surveyed by mail using the contingent valuation method (CVM) and asked to report their WTP for the product they had previously evaluated in the experiment. For all products, the mean WTP was lower in the mail survey than in the corresponding experimental session.

Nutritional Awareness and Exercise Habits Among U.S. Consumers: A Lorenz Curve Approach. *Satish Y. Deodhar and Stanley M. Fletcher, Univ. of Ga.; and Ron Larson, Univ. of Minn.*

Using a national survey conducted by the the Gallup Organization in 1996, we study the distribution of nutritional awareness and exercise habits among various segments of the U.S. population. Using a Lorenz Curve approach, we study this distribution based on socioeconomic and demographic attributes such as income, education, gender, and race. Policy implications are drawn that emphasize educating the target groups regarding the importance of nutrition and regular exercise.

Effects of Demographics, Information, and Attitudes on Hamburger Preparation Behavior. *YoLanda Starke, N.C. A&T Univ.; Katherine Ralston, USDA/ERS; and C. T. Jordan Lin, CSR, Inc.*

Using a national consumer survey on hamburger cooking practices, this study suggests that both food safety risk perceptions and palatability attributes play important roles in determining food preparation behavior. In addition, the effects of demographic variables sometimes differ from the nonattitude effects of these variables. For example, Southern consumers perceive a higher risk from, and have a lower preference for, undercooked hamburgers. But the direct, or nonattitude, effect of the South on the probability of consuming undercooked hamburgers is positive, suggesting other cultural factors are important. The net effect is that this demographic group is more likely to consume undercooked hamburgers.

TITLE: Rural and Community Development

A Comparison of State and Local Taxes. *Judith I. Stallman, Tex. A&M Univ.*

It is the observation of the author that citizens lack basic information about their taxes, which is necessary for an informed public debate. This study focuses on a comparison of taxes across states. The comparison provides information about a specific state, Texas, and how it compares with all other states. Using this readily available data, other states could make a similar comparison, providing basic information to citizens. Analysis suggests that the tax structure of Texas makes it a competitive location for businesses with low real estate and equipment values, but not for those with high property values.

TITLE: Teaching

Alternative Ph.D. Degree Program: Taking the Classroom to Foreign Students. *Cameron S. Thraen and Kelso L. Wessel, Ohio State Univ.*

An alternative Ph.D. program located at Makerere University, Kampala, Uganda, in cooperation with The Ohio State University, was administered through the Office of Interna-

tional Agricultural Programs and the Department of Agricultural Economics. The program is providing direct Ph.D. graduate education to 10 students from the Makerere faculty and Ugandan government agencies. This program takes professors and their courses directly to the students in their home institution. The program supplements and strengthens the graduate program at Makerere. Makerere graduate students, at the critical research stage, are linked with faculty in the United States via the World Wide Web.