

**SAEA 2014 Annual Meeting  
Selected Paper Abstracts**

**Biotechnology-Based Bioenergy Production: Implications for Crop Rotations**

Scott W. Fausti, Evert Van der Sluis, Bashir A. Qasmi, and Jonathan Lundgren

The effects of transgenic crop and federal biofuel policy (ethanol) on state-level cropping patterns in the Corn Belt region are investigated during 1996-2012. Empirical evidence generated by a random intercept model with fixed effects indicates corn production was positively impacted by these factors, but the effects across states are heterogeneous.

**Factors Driving Fruit and Vegetable Expenditures and Consumption Frequency in Lesser Developed Country: an Analysis of Urban Households from the Republic of Uganda**

Padmanand Madhavan Nambiar, Wojciech J. Florkowski, Manjeet S. Chinnan and Anna V. A. Ressurrecion

Factors affecting fresh fruit and vegetable expenditures in urban households of Uganda are analyzed employing the censored quantile regression. Results indicate that income elasticity of expenditure for fresh fruits exceeds one in 25th quantile, and reduces drastically in upper quantiles; for fresh vegetables income is relatively inelastic across different quantiles.

**Expenditure on Fresh Vegetables, Fresh Fruits, and Peanut Products in Urban Ghana: Does Location Matter?**

Ting Meng, Wojciech J. Florkowski, Daniel Sarpong, Manjeet Chinnan, Anna V.A. Resurreccion

The study found that beside socioeconomic and demographic factors (including income, education, marital status, age, and household composition), the fresh vegetable, fresh fruit, and peanut product expenditure are affected by location in urbanized areas of Ghana, and the location interacts with income in determining the food expenditure...

**Analysis of Three Pasture Systems for Grass-fed Beef Production: Labor Use and Profitability**

Basu D. Bhandari, Jeffrey M. Gillespie, and Guillermo Scaglia

Three Louisiana grass-fed beef production pasture systems were evaluated for labor use and profitability for four years from 2009/10 to 2012/13. Despite requiring greater labor, System 1, which included the lowest number of different forage species, yielded higher profit than System 3, which included the highest number of forage species.

**Export Demand Estimation for U.S. Corn and Soybeans to Major Destinations**

Yasser Saghaian, Michael Reed, and Sayed Saghaian

In this study, we use a log-linear equation to estimate the export demand of U.S. corn and soybeans to three main destinations, China, Japan, and EU. Data were gathered for the 1980-2011 period. The results showed that china had the most elastic demand, and soybean-price estimates were significant for China and EU.

**Efficiency, Technical and Productivity Change in Brazilian Agriculture: Regional Analysis**  
Silvia Miranda, Dragan Miljkovic and Saleem Shaik

Brazilian agriculture sector has increased significantly in the last three decades and is one of the largest and fastest growing in global economy today. This study examined the regional difference in Brazilian agriculture productivity using data envelopment analysis (DEA) and contributed to the debate of evaluating the importance of technical and efficiency change to productivity change.

**Trade Adjusted Productivity Measures: An Application to European Union**  
Saleem Shaik and Dragan Miljkovic

There is no systematic theories linking trade policy to productivity change (PC), technical change (TC) and efficiency change (EC). This research estimates trade-adjusted Malmquist productivity measure using panel of 18 EU countries from 1971 to 2009 and compare the trade-adjusted to traditional productivity measure to evaluate the importance of trade openness

**Energy Substitution in US Electricity Generation**

Osei Yeboah, Afia Fosua Agyekum, Julie Melikpor-Lee and Saleem Shaik

Panel SUR is used to estimate the substitution between electricity and other forms of energy in U.S electricity generation. The factor share equations are derived from translog cost function for 48 states from 1970-2010. Generally, limited substitution potential exists except for petroleum which was found to be a strong substitute.

**WTA BMP Bundles Beef Cattle Operations East TN Watershed**

Ali Kutz

This study examines factors influencing willingness to adopt four different best management practices - rotational grazing, pasture improvement, stream water crossing, and water tank systems - by beef cattle operations in three East Tennessee counties. Data were collected through a hypothetical experiment conducted in a mail survey of 5,150 landowners.

**On-site Experience Effect on Interest Group Preferences in Forest Management Policies**

Xiaoshu Li, Kevin Boyle, Genevieve Pullis and Thomas Holmes

In this study we conduct a stated-preference survey to investigate whether the on-site experience will change the preferences for forest management policies among interest groups and the public. The results show that the preferences are significantly different between each group in both the pretest survey and post-test survey.

### **Do Outdoor Recreation Participants Place their Lands in Conservation Easements?**

Ramesh Ghimire, Gary T. Green, Neelam C. Poudyal and H. Ken Cordell

This study examined the relationship between people's outdoor recreation participation and their decisions to designate lands in conservation easements. Results indicated people participated in land-based non-consumptive recreation activities have greater odds of placing their lands in conservation easements than people who participated in land-based consumptive recreation activities.

### **An Evaluation of the Importance of Site Characteristics on Freshwater-Based Recreations in the United States**

Ramesh Ghimire, Gary T. Green, Krishna P. Paudel, Neelam C. Poudyal and H. Ken Cordell

Using freshwater-based recreation data from a national survey and employing spectral analysis and rank-ordered logit model, this study analyzed the importance of site-amenities (closeness, water-quality, wildlife, size) on freshwater-based recreations. Findings suggested closeness is important for boating; water quality for swimming and picnicking; and wildlife for fishing and bird/nature viewing.

### **Comparing Carcass End-Point and Profit Maximization Decision Rules Using Dynamic Growth Functions**

Joshua G. Maples, Kalyn T. Coatney, John Michael Riley, Brandi B. Karisch, Jane A. Parish and Rhonda C. Vann

We develop a practical methodology for producers to estimate the optimal harvest time of live animals. We incorporate nonlinear dynamic growth functions into the producer's objective function. Currently, the cattle industry objective is to produce a constant carcass end-point quality. We find significant increases in profitability using our methodology.

### **Historical Trends toward Optimal Soybean Profitability – The Arkansas Soybean Research Verification Program**

C. Robert Stark, Jr., Jeremy Ross, and Chris Grimes

Optimal profitability is an ongoing goal of the soybean industry. Following state extension management recommendations can move producers closer to this goal. Soybean Research Verification Programs provide economic and agronomic data to validate recommendations. Key

economic variable changes are quantified and improvement value gained through Arkansas SRVP participation is estimated.

### **Assessing the Feasibility of Cofiring Wood Pellets with Coal for Electricity Generation: A Real Option Analysis**

Hui Xian, Gregory Colson, Bin "Richard" Mei and Michael E. Wetzstein

Real options is employed for investigating the lack of incentives for U.S. coal-power plants to cofire wood pellets. Results indicate that despite a thriving U.S. wood-pellet industry to supply EU demand, the price differential between wood pellets and coal and the muted level of fuel volatility renders U.S. cofiring unsupportable.

### **Willingness to Pay for Safer Dairy in China: Evidence from Shanghai Customers' Purchasing Decision of Bright Dairy's Baby Cheese**

Yiwei Yan, Glenn C. W. Ames, Tinggui Chen and Gregory Colson

The objective of this study is to analyze Shanghai customers' willingness to pay (WTP) for safer Baby Cheese product from the Bright Dairy company. Based on the interval regression model and 174 respondents' survey data, we found the average WTP (17.406 RMB/92g) and some significant effective factors for consumers' WTP.

### **Hog Price Transmission in Global Market: China, EU and US**

Ying Tan and Hector Zapata

This paper analyzes twelve years of monthly hog prices for China, the U.S., and EU markets. Using cointegration and error-correction modeling, and non-causality tests, it is found that while weak linkages are existed, prices in the Chinese market are more closely linked to EU prices than to U.S. prices.

### **Trade Liberalization effects on Agricultural Production Growth: The Case of Sri Lanka**

Lijiao Hu

This paper investigates how payments for carbon offsets and bioenergy impact the optimal management of hardwood forests under conditions of risk and price uncertainty that represents by the use of an E-V model. The results show that higher carbon price increases LEV and rotation age; fire risk decreases LEV and rotation age.

### **Factors that Affect Seasonality in Kentucky Feeder Calf Prices and How Calving Dates Affect Cow-Calf Enterprise Profitability**

Dan Hardin and Sayed Saghaian

This study uses an empirical analysis and a budget analysis to study seasonality in calf prices and cow-calf operator incomes. Calf prices were found to be highest in the summer and lowest in the fall while profits for cow-calf operators were found to be highest for spring calving cow herds.

### **Liberalized World Trade and Food Import under Foreign Exchange Constraints in the CFA's Franc Zone of Sub-Saharan Africa**

Seydina O. Sene and Sayed H. Saghaian

This paper finds a long-run relationship between food imports, commodities prices, exchange rates, food production, GDP, and trade openness in the CFA zone of Sub-Saharan Africa. We use a panel Vector Error Correction Model with exogenous prices expanded beyond the Hemphill' approach (1974) on rice, wheat, maize, and sugar under fixed exchange rate constraint.

### **Are Resources a Curse? An Investigation of Chinese Provinces**

Na Zuo and Jack Schieffer

Low economic growth in resource-rich regions is called the “resource curse”. This research empirically investigates the resource curse at Chinese province level. Of two popular explanations for the resource curse, our analysis supports the crowding-out effect rather than the institution explanation. Education and R&D are the two main crowded-out factors.

### **U.S. Import Demand for Cocoa Products**

Lucie A. Kadjo and James Seale Jr.

This paper aims to apply four models, AIDS, Rotterdam, NBR, and CBS to estimate demand elasticities for cocoa beans and chocolate products over the period 1986-2010 and 1993-2010 respectively. The general model is then used to test which of the four demand systems best fits the data.

### **The Effect of Brand Equity across Seafood Products**

Yoonsuk Lee and Jae Bong Chang

The effect of brand equity on unbreaded frozen seafood products is measured through market share. The results indicate that brand equity of the selected seafood products scarcely exists. However, a noteworthy market share of store brands draws an important attention on a role of store brands in seafood markets.

### **Are Resources a Curse? An Investigation of Chinese Provinces**

Na Zuo and Jack Schieffer

Low economic growth in resource-rich regions is called the “resource curse”. This research empirically investigates the resource curse at Chinese province level. Of two popular explanations for the resource curse, our analysis supports the crowding-out effect rather than the institution explanation. Education and R&D are the two main crowded-out factors.

### **Food Insecurity and Educational Achievement**

Simone Angioloni, Jack E. Houston and Glenn C.W. Ames

This paper investigates the educational achievement for the 5th grade students in Georgia in 2008. The paper employs spatial error regression model to control for the local correlation. The results indicate that the school performance is inversely related to food insecurity and positively related to the racial diversity.

### **The Economic Impact of Beta Agonist Removal from Beef Production**

Myriah D. Johnson, David P. Anderson, Jason E. Sawyer, and Tryon A. Wickersham

Beta agonists are feed additives that increase the efficiency of feed conversion in cattle. Their use has been controversial lately. This research examines the impact of their removal from the market on farm, slaughter, wholesale, and retail production and prices of beef.

### **Effect of Branding Gulf oysters on Consumers' Willingness to Pay**

Sarah Acquah and Daniel Petrolia

Using a choice experiment this study found that raw oyster consumers are more likely to buy oysters harvested from their region over those harvested outside the region. Consumers are more likely to buy wild-caught oysters over cultivated oysters. Non-Gulf consumers are more likely to buy medium or large size oysters over small size.

### **Optimal Cross Hedging Winter Canola**

Seon-Woong Kim, B. Wade Brorsen and Byung-Sam Y.

Winter canola in the southern Great Plains has shown large price fluctuations and there have been questions about which futures market could be used to reduce price risk. Our results indicate that the optimal futures contract to cross hedge winter canola is soybean oil futures.

### **Bayesian Estimation of Optimal Nitrogen Rates with a Nonnormally Distributed Stochastic Plateau Function**

Frederic B. Ouedraogo and Wade Brorsen

Despite abundant literature on crop yield distributions, there is no strict agreement about functional form and distributional assumptions. This paper estimated the optimal nitrogen rates

in wheat production assuming a stochastic plateau yield function with nonnormal random effects using a Bayesian estimation methods and a noninformative prior for model parameters.

### **Understanding Producer Strategies: Identifying Key Success Factors of Commercial Farms in 2013**

Jacqueline K. Holland, Nicole J. Olynk Widmar, David A. Widmar, David L. Ortega and Michael A. Gunderson

Farm management is a series of complex processes incorporating a variety of dynamic factors which managers are constantly asked to prioritize and allocate management effort amongst. This work determines which of five success factors commercial producers identified as most important for the success of their operation.

### **A Look at the Variations in Consumer Preferences for Farmers' Markets Attributes**

Clinton Neill and Ryan Williams

The purpose of this study is to determine the effects of physical attributes of farmers' markets on a customer's willingness to attend a particular market. It was found that ease of movement between vendors is the most important attribute while the least important is the availability of seating.

### **Marginal Implicit Values of Soybean Quality Attributes**

Jewelwayne Cain and Joseph Parcell

Soybean quality attributes, such as protein and oil, have become more important as markets realize their impact in relation to utility. We use a hedonic model that takes into account spatial competition in soybean quality to estimate and analyze implicit prices attributed to protein and oil contents of U.S. soybeans.

### **Analysis of Financial Performance of U.S. Hog Farms Using a DuPont Expansion: Is there a Future for Independent Hog Producers Non-Radial Technical Efficiency of Water and Nitrogen Usage in Arkansas Rice Production**

K. Bradley Watkins, Christopher G. Henry, Ralph Mazzanti, Lance Schmidt, and Jarrod T. Hardke

Data Envelopment analysis (DEA) is used to calculate non-radial technical efficiency and to calculate the degree of water and nitrogen overuse in Arkansas rice production using data from the University of Arkansas, Rice Research Verification Program (RRVP). Water and Nitrogen overuse averaged 28 and 15 percent, respectively across RRVP fields.

### **An Empirical Analysis of Demand for U.S. Soybeans in the Philippines**

Jewelwayne Cain, Joseph Parcell and Yasutomo Kojima

We analyze quantity shares and relative prices of soybeans imported from three countries to the Philippines to determine whether the downward trend in the U.S. market share is due to quality differences or to changes in relative prices. Results indicate that the downward trend can be explained by quality preferences.

### **Expressing Individuality via Food Choices**

Amanda Simpson Weaver and Jason Lusk

Expressing one's identity has grown in popularity in recent years through a new medium – food – which now exceeds meeting just basic physiological needs. We compare food personality factors with food attribute factors, and results show that identity is expressed via food at differing levels and income level has some influence.

### **Farmers' willingness to participate in Best Management Practices in Kentucky**

Hua Zhong and Wuyang Hu

This article investigates farmers' willingness to participate in best management practices (BMPs) through a proposed Water Quality Trading (WQT) program in Kentucky. The results show that farmers' perceptions about BMPs are effective determinants to their adoption of additional BMPs than the level of compensation proposed through our study.

### **A Hedonic Price Analysis of the Internet Auctions for the BLM's Wild Horses and Burros**

Omotoyosi Adekunle Van Wie, Sayed Saghaian, and Markus Lang

This study is a hedonic pricing analysis of the BLM's internet auctions for wild horses and Burros to identify physical characteristics for the purpose of increasing public adoption rate. The effects of the physical characteristics of each horse on a buyer's decision to bid for a horse are determined.

### **Effects of Shale Energy Production on Cropland Land Rents in North Dakota**

Markus Lang and Sayed Saghaian

This paper explores the effects of increasing energy production in North Dakota on cropland rents from 2009 to 2011. Results show a small negative impact of natural gas production revenue on average per acre rents. While small, the impact increased steadily over the three year period.

### **Local Food System Investment: A Proposal for a Novel and Targeted Approach**

Kathryn Boys

There is significant competition for resources to support local food system (LFS) infrastructure development. Frequently, however, these resources are not allocated to locations that offer the best potential return on public investment. This study proposes a novel, GIS based, approach to identifying areas that would be appropriate for LFS development.

### **The Effect of Taxes on Capital Structure in Farm Supply and Marketing Cooperatives**

Levi A. Russell and Brian C. Briggeman

This paper examines the effects of tax rates and member risk preferences on the optimal distribution and retention of earnings of agricultural cooperatives. Results indicate that the effect of changes in cooperative tax rates is minimal but the effect of changes in member risk aversion is significant.

### **Analyzing Replacement and Expansion of Grain Storage Structures in Oklahoma**

Arjun Basnet and Phil Kenkel

A mixed integer programming model forecasts grain facility replacement. The results indicated regionalization in grain storage with fewer but larger structures. Producer transportation cost increase slightly but combined storage construction and transportation costs are significantly lower. The findings are important to grain firms and producers considering replacement of obsolete facilities.

### **ISO 22000: A New Tool to help Facilitate International Food Trade**

Kathryn Boys

An international standard for food safety management systems was recently released (2005). While providing structure to within-firm practices, this standard may also offer adopting firms business facilitation benefits. This presentation introduces ISO 22000 and explores to what extent, and in what manner, it may facilitate international trade of agricultural products.

### **Using self-reported data collection and analysis to facilitate student learning: A case study**

Hoshua Berning

As part of an undergraduate course in agricultural economics, students recorded their own fruit and vegetable consumption over a 7-week period. The aggregate data were used by the students to test their own hypothesis regarding fruit and vegetable consumption. This paper discusses the benefits and drawbacks to this teaching approach.

### **Model County-level Poverty Rate in Georgia Using Spatial Analysis Method**

Ting Meng and Lynne Seymour

Conditionally Auto-regression is employed to investigate the determinants of county-level poverty rates in Georgia 2011, and also examine whether those poverty rates are spatial correlated. The results indicate that annual income, white person percent, and elder percent have positive effects, while there is no significant spatial correlation.

### **A Demand Model of the Wholesale Vegetable Oils Market in the U.S.A**

Yasutomo Kojima, Joseph Parcell and Jewelwayne Cain

Dramatic changes have been observed in the U.S. vegetable oils market since the mid-2000's. This research analyzes the quantity-price demand system of the U.S. vegetable oils market by estimating compensated demand models for eight vegetable oils. For each of the eight vegetable oils, own-price, cross-price, and income elasticities are examined.

### **An Economic Analysis of Three Stocking Systems in the Southeastern United States** Eric R. Rama, Curt Lacy, Dennis W. Hancock, and Lawton Stewart, Jr.

Deterministic and probabilistic models were developed to calculate returns over variable costs for three stocking systems in the Southeastern United States. Purchasing 350 pound calves in October-November and selling calves weighing 750 pounds in March-April using cool-season forages was determined to be the superior system in terms of projected returns.

### **Agricultural Banking and Bank Failures of the Late 2000s Financial Crisis: A Duration Model Analysis**

Xiaofei Li

This study employs a semi-parametric Cox proportional hazard model to study the relationship between survival time and bank-specific determinants of failure of commercial and agricultural banks during the recent recessionary period. Results indicate that non-performing consumer and commercial loans have seriously impaired banks' financial health and survival.

### **Goal Structure of U.S. Meat Goat Producers: Is Farm Performance Consistent with the Goals**

Narayan P. Nyaupane

This study uses data from a national survey to determine the goal hierarchies of U.S. meat goat producers and the factors impacting goal structure. Profit maximization and leisure-related goals were the highest-ranked goals. Producer demographics, farm descriptors, region of production, and other factors impacted goal structure.

## **The Impact of Marketing Channels Used by U.S. Meat Goat Producers on Farm Profitability**

Narayan P. Nyaupane

This study investigates factors influencing the use of marketing channels in U.S. meat goat production. Producer demographics, production system, socioeconomic, and regional variables impacted marketing channel selection. Larger-scale producers selling goat meat or selling larger percentages of goats as slaughter or as meat were more profitable.

## **Farm Market Patron Responses to Food Sampling – Does it Really Make a Difference?**

Bruce Yang and Tim Woods

Behavioral impacts of sampling at farm markets by patrons visiting the market are examined with a view toward understanding the effectiveness of this strategy. Impacts differ by product type, but the overall impact on immediate purchase and referral for the vendor offering samples is substantial.

## **Estimation of U.S. Demand For Imported Shrimp By Country: A Two-stage Differential Production Approach**

Xiaojin Wang and Michael Reed

The demand for imported shrimp in the United States by country of origin is estimated by using the two-stage differential production method. Conditional and unconditional own/cross price elasticities are derived. We further project how countervailing duties imposition by U.S. affect source-specific shrimp imports.

## **Are Revisions of USDA's Commodity Forecasts Efficient?**

Ran Xie, Olga Isengildina-Massa and Julia Sharp

This study proposed a statistical procedure for correction of inefficiencies in revisions of WASDE forecasts for U.S. corn, soybeans, wheat, and cotton. The proposed procedure takes into account the issue of outliers, the impact of forecasts size and direction, and the stability of revision inefficiency and could improve forecast accuracy.

## **Economic Analysis of Sorghum Silage Potential for Dairy Industry in the Texas High Plains**

Oladipo Obembe, Lal Almas, Bridget Guerrero and David Lust

Economic analysis of sorghum silage potential for the growing dairy industry was conducted and identified yield effect, water saved, feed requirement, acreage and production cost. More acreage, irrigation water and feed will be needed if sorghum silage is used to replace corn silage unless dryland sorghum silage yield is improved.

## **Economic Risk, Tropical Storm Intensity and Coastal Wetlands: A Factor Analysis**

James Boutwell and John Westra

Coastal communities are highly sensitive to economic damage from tropical storms. Wetland restoration is often proposed as a measure of protection from storm damage. This paper investigates the relationship between coastal storms, wetlands and communities by analyzing storm events and resulting damages from storms making landfall in Louisiana.

## **Factors Influencing Adoption of Varroa Sensitive Hygiene (VSH) Queens in Honey Bee Breeding Industry**

Julie Leiby and John Westra

Honey bees, important nationwide to high-valued fruit and nut production, have been decimated by Varroa mites. USDA developed Varroa Sensitive Hygiene (VSH) queen bees in response. Analysis with a probit model indicated education (beyond high school) and risk aversion positively affected adoption. Counterintuitively, income negatively influenced adoption of VSH technology.

## **Revisiting Days Suitable for Fieldwork Relative to Global Climate Cycles**

Tyler B Mark

ENSO is a climatic phenomenon that influences global weather patterns. The objective of this paper is to assess the impact it has on DSFW. DSFW fluctuations impact an operator's equipment purchases, planting/harvesting decisions, and profitability. Results indicated that DSFW is negatively impacted during El Niño cycles for states analyzed.

## **Persistently Infected: Does it pay to test**

Mallory Vestal and John Richeson

BRD accounts for approximately 70% of feedlot morbidity and 50% of feedlot mortality, negatively affecting profit. This study provides an economic evaluation and net return estimate associated with testing and removal of BRSV persistently infected (PI) calves of differing management backgrounds (low-risk preconditioned calves vs. high-risk auction market calves).

## **What Drives Local Wine Expenditure in Kentucky, Ohio, Tennessee and Pennsylvania? A Consumer Behavior and Wine Market Segmentation Analysis**

Xueting Deng and Tim Woods

This study explores wine expenditure driven factors for consumers in the United States by employing a four-state consumer behaviors study. Market segmentation measurements are

applied to investigate spending patterns of wine consumers in Kentucky, Ohio, Tennessee and Pennsylvania. This study also recommends market strategic insights for wine business stakeholders.

### **The Market Effects of Low-Oligosaccharide Soybeans**

David Shively and Joseph Parcell

Research suggests that soybean meal derived from low-oligosaccharide soybeans could displace more expensive products in young pig and poultry diets without a loss in efficiency. This raises questions about the market effects and division of surplus throughout the soybean meal value chain. This study addresses these questions.

### **Risks in Potato Production: Fertilizer, Water, and Producers' Decision Making**

Serhat Asci, Tatiana Borisova, and John J. VanSickle

Best management practice (BMP) for agricultural producers both optimizes the crop production and minimizes water quality impacts from agricultural operations. In this study, linear stochastic plateau production function is used to evaluate weather-related risks associated with the alternative fertilizer rate BMP. Recommendations for improving BMP development process are provided.

### **Estimating the Benefits of Water Quality Improvements Using Meta-Analysis and Benefits Transfer**

Sergio Alvarez and Serhat Asci

In this paper we conduct a meta-analysis of the non-market valuation literature dealing with water quality improvements in the United States. We use this meta-analysis to estimate benefits transfer functions, which will allow us to estimate the water quality improvements in the state of Florida as a result of adoption and implementation of agricultural BMPs.

### **Hedging Potential Declines in Iowa and Kentucky Farmland Values**

John Barnhart

The paper evaluates how farmland values and farmland cash rents are affected by cash corn prices, soybean prices, corn yields, soybean yields, the interest rate on a 10 year United States Treasury bond, and the United States Dollar foreign exchange value. Results are significant for these variables. Most importantly, how can farmers reduce portfolio risk?

### **Economic Returns and Risk Analysis of Forage Wrapping Technologies**

J. Ross Pruitt and Lacy Curt

Use of bale wrapping technology allows beef cow-calf producers to lower their forage costs while improving the nutritional content of stored forages. Using stochastic simulation, we evaluate the cost savings a cow-calf operation may experience by adopting this technology. This technology can lower per head feed costs for larger herds.

### **Impact of Graze-Out in Hard Red Winter Wheat Production**

*Diwash Neupane and Charles B Moss*

We investigate the relationship of wheat graze-out to cattle-wheat price ratio and moisture level and examine the impact of graze-out on wheat yield in major wheat-producing states in US. Results indicate that cattle-wheat price ratio and moisture level affects farmers' graze out decision and graze-out have significant impact on wheat yield.

### **Determining Willingness to Adopt Machine Harvesters among Southeast Blueberry Farmers**

Aaron D. Rodgers

This study uses logistic regression techniques to determine factors affecting adoption of mechanical harvesting technology by blueberry farmers in the Southeast. Research shows blueberry production expanding concurrently as agricultural labor workforce is contracting. Survey and wage data from Florida, Georgia, Mississippi, and North Carolina was utilized to estimate adoption likelihood.

### **Consumer's Preference in Purchasing Differentiated Products: A Case of Shell Eggs**

Yan Heng

This study is to estimate the demand and substitution pattern of differentiated eggs using a brand-level scanner data on national egg sales from 2008 to 2010. An Almost Ideal Demand System (AIDS) and a standard logit model are applied, and results generated from the two models are compared for differences.

### **Dynamic Adjustment of Demand for Distiller's Grain: Implications for Feed and Livestock Markets**

Dong Hee Suh and Charles Moss

This paper examines the dynamic adjustment of the demand for distiller's dried grain with solubles (DDGS) to the ethanol mandate. The results of the dynamic linear logit model suggest that a growth in the mandated volume of ethanol can increase the demand for DDGS as a substitute for corn.

### **The Impacts of Food Safety Incidents on U.S. Beef Trade: A Gravity Model Approach**

Xia (Hsia) Shang

This paper examines the impacts of food safety incidents on U.S. beef trade using a gravity model. With food safety variables, the estimations confirm the general intuition of the gravity model in beef export equation and indicate that the occurrence of BSE could make a huge loss for U.S. beef exports.

**Assessing the impact of migration and remittances on technology adoption in rural Senegal**  
Sam Kaninda

The paper analyzes the impact of migration and remittances on the use of new technologies in rural Senegal. Data were analyzed using a three stage least squared model. The results reveal that internal and international migrations as well as international remittances have a positive impact on the adoption of new technologies.

**Consumers' Willingness to Pay for Seafood Product Attributes: A Multi-species and Multi-state Comparison**

Thong Meas, Wuyang Hu, and Sayed Saghaian

This study surveys consumers' perception of issues in seafood production and uses choice experiments to investigate consumer preferences for the most consumed fish species. Results suggest that consumers are willing to pay positive premiums for domestic origin, eco-friendly practices, and fresh and natural attributes but not for wild-caught attribute.

**A Contingent Water Banking Program to Support Shortnose Sturgeon Migration in the Savannah River Basin during Drought Periods**

Matthew C. Huber and David B. Willis

A hydrologic-economic optimization model of water use in the Savannah River Basin is presented to evaluate the cost-effectiveness of policies designed to facilitate shortnose sturgeon migration. Economic costs and benefits of the water storage and streamflow policies designed to provide sufficient water in critical sturgeon migration time periods are analyzed.

**Short Run and Long Run dynamics in the Demand of U.S Tree Nuts**

Sebastain N. Awondo and Esendugue Greg Fonsah

There has been significant shifts in both international and domestic demand for U.S tree nuts over the past decade with potentially mixed effects for U.S producers and consumers. This paper investigates short run and long run dynamics in the domestic demand for six brands of tree nuts (pecan, almonds, walnuts, macadamias, pistachios and hazelnuts).

### **Determinants of rice productivity and technical efficiency in the Philippines**

Krishna Koirala, Ashok Mishra, and Samarendu Mohanty

This paper focuses to measure the technical efficiency (TE) of rice production in Philippines. Loop Survey of IRRI (2007-2012) was analyzed using stochastic frontier production method. Fuel, fertilizer, land rent, planting season, and land area affect both production and TE of rice production. We found mean TE score of 0.54.

### **Risk Reducing Effects of the Dairy Security Act on Southern Dairies**

Brian K. Herbst, David P. Anderson, Joe L. Outlaw, James W. Richardson and Stephanie Mazurkiewicz

Dairyman have been searching for alternative methods to protect their margins against risk. The Dairy Security Act proposes to provide margin protection for dairies for the Farm Bill. This study showed the DSA provides protection but it is not consistent across all regions and sizes of dairies.

### **Determining and Evaluating the Profitability of Multi-species Livestock Enterprises within West-Central Texas**

M. R. Butler, S. S. Howry, A. D. Monroe, Jr. and L. R. Barnett

Enterprise budgets are effective tools to estimate profits for various livestock operation scenarios. This study found that multi-species livestock enterprises are more profitable, even under moderate market variability, for west-central Texas operations. Furthermore, a survey of industry producers showed that, estimated enterprise budgets tended to underestimate actual profits.

### **Factors contributing to farm management returns in Kentucky**

Nicaise Sheila M. Sagbo, Yoko Kusunose, and Jonathan D. Shepherd

Fixed-effects regression and quantile regression reveal that farm size, business orientation, and greater assets have a negative influence on management returns as opposed to percentage of sharecropped acres and percentage of cash-rented acres. Beef and dairy farms yield greater management returns compared to grain farms. Government payments positively affect only returns of low-returns farms.

### **Consumer Willingness to Pay for Environmental Production Attributes in Tomatoes: A Southeastern Consumer Survey**

McKenzie Maples, Matthew Interis, Kimberly Morgan and Ardian Harri

The objective of this study is to evaluate Southeastern consumers' willingness to pay for specific environmental attributes involved in the production of fresh tomatoes. We find that consumers

are concerned about the environmental impacts of tomatoes and are willing to pay a price premium to reduce these impacts.

### **U.S. Ethanol Mandate Is a Hidden Subsidy to Corn Producers**

Ekaterina Vorotnikova and James Seale, Jr.

Using welfare economics, this study formally shows that the RFS Ethanol mandate is a hidden subsidy to the corn producers. This link is necessary in order to properly assess the effects of the mandate on other industries. The study shows that the mandate increases world prices for corn and is trade altering.

### **Land Allocation Dynamics in China for Five Top Staple Crops: Corn, Soybeans, Wheat, Rice, and Cotton from 1985-2012**

Ekaterina Vorotnikova and James Seale, Jr.

In this study, a differential land allocation model quantifies the effect of price on acreage allocation among top five crops in China from 1985 to 2009. The crops are corn, soybeans, wheat, rice, and cotton. The results suggest that corn competes for land with rice and wheat, and, in turn, rice competes for acreage with cotton.

### **Risk in Producer Level Impact of the SAS-based Fungicide Application Technology**

Ekaterina Vorotnikova and James Seale, Jr.

Using producer level field trials, collected over three-year period from nine farms in Florida, we conduct profitability and risk analysis of the new fungi management system under a range of weather conditions and price levels. We utilize stochastic and NPV methodologies and find that the new system increases both profits and risk for a typical farmer in Florida.

### **The effect of Energy Policy Act (EPA-2005) on Agricultural Land Allocation Dynamics in the United States**

Ekaterina Vorotnikova and James Seale, Jr.

We estimate the acreage response to the own and other crops' relative price changes in the crop specific pairs before and after the 2005 EPA policy. Corn-soybeans and hay-cotton (behaving as competitors) and wheat-cotton, corn-other crops, and hay-other crop combinations (behaving as compliments) show a significant structural change due to EPA 2005.

### **Farm Subsidy Incidence in the Presence of Bertrand Competitors of Complementary Factors of Production: A Theoretical and Experimental Approach**

Abby Kelly Poe, Kalyn Coatney, Keith Coble and Matthew Freeman

Using a two-stage dynamic game between a buyer and two Bertrand suppliers of complement inputs; we demonstrate that a buyer retains approximately seventeen percent of a coupled subsidy payment associated with only one of the inputs. We identify market power and product substitutability as root causes for subsidy incidence.

### **Effect of Remittance on Agricultural Technology Adoption in Nepal.**

Mahesh Pandit, Krishna Paudel and Deborah Williams

We used survey data collected from Chitwan, Nepal to understand technology adoption behavior by farmers. Regression results obtained by using various Poisson models indicated that remittance plays an important role in technology adoption. Other variables affecting the technology adoption are land holding size, age and income from agriculture.

### **Migration and Remittance and Their Impacts on Food Security in Nepal.**

Madhav Regmi, Krishna Paudel, and Deborah Williams

We collected survey data to identify the impact of pertinent explanatory variables on children, adult, and household food securities. Results indicated remittance receipts have significant impact on making household food secure. Other factors affecting food security are education, agriculture income, adoption of hybrid corn/rice, and conservation practices adoption.

### **Adoption and Nonadoption of Precision Farming Technologies by Cotton Farmers**

Mahesh Pandit, Krishna Paudel, Ashok Mishra, Dayton Lambert and Jeanne Reeves.

We used survey data to understand the role played by various explanatory variables on the adoption/nonadoption of precision farming technologies in cotton production in 14 U.S. States. Results indicated that Variables commonly known to affect technology adoption are education, information, farm size, computer use, and respondent's age.

### **Identification of Optimal Best Management Practices to Reduce Nutrient and Sediment Pollution from Nonpoint Sources: A Case of Halfway Bayou in Louisiana.**

Bijay Pokharel, Krishna Paudel and Bryan Gottshall

We identified the optimal combination of BMPs under alternative weather scenarios (wet, normal, and dry) and parameter uncertainties for the Halfway Bayou Watershed in Louisiana. Analyses indicated that phosphorus pollutant impacting the watershed can be reduced substantially by adoption of different vegetative buffer and nutrient management BMPs.

### **Environmental Kuznets Curve for Water Quality Parameters at Global Level.**

Krishna Paudel, C.-Y. Cynthia Lin and Mahesh Pandit

We examined the relationship between income and water pollutants using country-level global water quality data over the period 1980 to 2012. We include civil liberties and political rights in addition to income as explanatory variables. Results indicated that pollutant-income relationships were quadratic for only lead pollution.

### **Optimal Water Allocations for the Irrigation and Hydropower Sector: The Case of Sri Lanka**

K V Nirodha Sudershini De-Silva

This paper is an attempt to calculate optimal water allocations for both irrigation and the hydropower sector in Sri Lanka using the secondary data during 2010 and 2011. Results show that saving of irrigation water increases the hydropower generation and increases the social benefits and welfare gains in Sri Lanka.

### **Social Advertising Using Facebook: Some Experimental Results Using Duck Dynasty Ads to Promote Rural Tourism in Mississippi**

James Barnes and Kalyn Coatney

In this paper, we explain how the Mississippi Bricks to Clicks Extension Program assisted in the promotion of a rural tourism event using Facebook paid advertisements. We estimate a binomial regression model to explore the factors that affect business page likes. Implications for future research and Extension programming are discussed.

### **The Economic Impact of Social Media on Small Businesses: Evidence from Three Mississippi Extension Programs**

James Barnes, Ken Hood and Roberto Gallardo

With many social media companies now in the marketplace, it behooves small businesses not to use these outlets to market their products, especially rural businesses. In this paper, we discuss some of the economic impacts of using online social networks and provide case study evidence from Mississippi.

### **Is There a Relationship Between Higher Incomes and Local Food Systems?**

Trey J. Malone and Dave W. Shideler

Although we find a positive statistical relationship between farmer participation in local food systems and per capita income at the state level, county-level correlation varies significantly. Participation increases in higher income urban and suburban counties but the data does not support a relationship between high incomes and rural farmer participation.

## **Homeowner Practices and Preferences for Sustainable Residential Lawn Care: The Choice of Lawn Fertilizers**

Hayk Khachatryan

This study developed a choice model to investigate homeowners' lawn fertilizer choice decisions using data collected through an Internet Florida. We found that fertilizers carrying environmentally sustainable attributes (e.g., controlled release nitrogen, phosphorus free and organic/natural) gained price premiums. Other preferred attributes included pet friendly labeled, insect control included, weed control included.

## **Characteristics That Make a Farm Consistently Profitable**

Gregg Ibendahl

An examination of a panel data set from Kansas farm management data shows that despite the variability that weather causes, some farms are consistently more profitable than other farms. This paper examines farm characteristics to determine the factors that affect the consistency of farm profitability in order to help provide guidance to farmers.

## **Trade and Price Impact of Thailand Paddy Pledging Program on the Global Rice Market**

Eddie C. Chavez, Eric J. Wailes, and Alvaro Durand-Morat

Thailand's Paddy Pledging Program has resulted in an excessive and costly government rice stockpile, causing operational and political controversies within Thailand and uncertainties in the global rice market. Analysis shows that release of Thailand's rice stocks results in global price declines and global consumption increases, with moderate net welfare changes.

## **Regional water savings and increased profitability on the Texas High Plains: A case for water efficient alternative crops**

Robert Kelby Imel and Ryan Blake Williams

The Ogallala Aquifer has experienced substantial declines due to extensive irrigation use to cultivate field crops in this region. We need to seek alternative crops that maximize profits while reducing water usage. With linear programming, we identified cropping rotations that could be beneficial for producers on the Texas High Plains.

## **Alternative Irrigation Strategies to Mitigate Greenhouse Gas Emissions and Conserve Water in Rice Production In the Arkansas Delta.**

Lawton Nalley, Merle Anders and Kent Kovacs

This study looks at the economic feasibility of Alternate Wet Drying irrigation methods to address concerns of groundwater depletion and greenhouse gas (methane) emissions associated

with rice production. These results will give producers as well as large rice buyers an idea of relative profitability and additional premiums necessary to switch to/source a more “sustainable” rice crop.

### **Catfish Pond Conversion Sensitivity Analysis**

Lawrence L. Falconer

Decreased profitability of catfish production has led to a 50% decline in catfish pond acreage in Mississippi. This study indicates that with catfish prices at or above \$0.90 per pound, channel catfish production using multiple-harvest, conventional pond systems would be preferable to conversion to irrigated soybean or irrigated corn production.