



RESEARCH UPDATE

Spring, 2011

Department Head Comments

Welcome to the first issue of our departmental update highlighting recent agricultural economic faculty research, which covers a vast array of topics.

Research projects are determined by faculty members after reviewing current research efforts in our profession and utilizing input from peers, clientele, collaborators, and funding agencies.

Faculty members seek varied outlets including peer reviewed journals, extension publications, professional meetings, popular press, and industry meetings.

We hope these research efforts aid producers, ranchers, policymakers, emerging businesses, and Oklahoma citizens.

The 48 peer reviewed journal articles listed as 2010 research products represent a diverse set of products resulting from faculty members' efforts.

Research Update

Published by the Department of Agricultural Economics at Oklahoma State University
Editor: Judy Rudin
(Communications Specialist)
Web Developer:
Senthilrajan Moorthy

Examples of departmental research projects address many varied issues

Research conducted by agricultural economics faculty members covers a wide range of issues, from food programs, farmer's markets, and biofuels to genetic markers for the cattle industry and water quality and usage.

Research Update is a new bi-annual newsletter from the agricultural economics department at Oklahoma State University to showcase current research being done by department faculty members.

In this issue, we feature surveys conducted to improve participation



in Oklahoma farmers' markets, provide information on Oklahoma



Food Cooperative members, and help improve efficiency of the Farm-to-School food program.

Other projects

featured deal with biomass production, genetic markers in beef cattle, farm bill ACRE program training, and water quality and usage.

These stories are followed by a list of the articles published by agricultural economics faculty in various scholarly publications for the the 2010 calendar year.



Improving Participation in Local Food Markets: A Case Study of Oklahoma Consumers

Local food markets, such as farmers' markets, are one of the oldest forms of direct marketing by small farmers. In the last decade they have become a popular channel for marketing fresh produce in Oklahoma, as evidenced by their dramatic growth.

In just the last two years, spurred by consumer interest in locally grown foods, the number of Oklahoma farmers' markets has increased by 35.5%.

Researchers

Dr. Shida Henneberry, agricultural economics regents professor, and Carra Crow, agricultural economics graduate research assistant worked together on this project.



Research assistant Carra Crow selling at the Stillwater Farmers' Market at age 14.

Issues

Despite the growth of these markets, consumer participation in Oklahoma has been limited.

Unofficial estimates indicate that only a very small percentage of Oklahoma fresh food buyers participate in local food markets.

In addition, the per-capita consumption of fresh produce in Oklahoma, from any source, is consistently lower than the recommended amounts. This lack of fresh produce in the diets of Oklahomans has had a negative impact on the Oklahoma economy, including medical costs and lost productivity from death and disability.

The relatively small consumer participation also presents an obstacle for improving the long-run sustainability of local food markets and for maximizing their benefits for community development and as an income source for producers.

Objective

The objective of this research project was to identify the barriers to consumer participation in local food markets by surveying consumer participants in both local food markets and traditional markets regarding their buying habits.

More specifically, the relative

impact of demographics, consumer attitude, experience, and perception, and promotion strategies in the successful marketing of local foods in Oklahoma farmers' markets were examined.

Project

Producers and consumers at 20 Oklahoma farmers' markets were surveyed over the summer of 2010.

Items such as convenience, food buying philosophies, pricing, and quality were addressed in the survey.

The commodity categories studied included the following items, all locally grown or produced:

- Fruits and/or Vegetables
- Bedding Plants and/or Herbs
- Baked Goods and/or Canned Goods
- Soaps and/or Lotions
- Frozen Meats and/or Eggs

The survey addressed the following questions:

- Why do consumers shop at local food markets?
- What product attributes do consumers value most?
- How much are consumers willing to pay for local foods?
- How accurate are producers' perceptions of shopper characteristics?
- Why aren't more producer

participants willing to accept food assistance credits?

Results

The survey produced the following results:

- Consumers give freshness and superior quality (as compared with products offered at grocery stores) as the top reasons for shopping at Oklahoma farmers' markets.
- Consumers rank "locally grown", "organic", "better nutrition", and "food safety" (listed in the order of importance) as the most valued attributes of products offered at farmers' markets.
- Consumers are willing to pay a premium price for products offered at farmers' markets as compared to those offered at retail outlets.
- Producers' perceptions of their customers' age, income, and education were close to actual consumer characteristics.
- A large majority of the producers are willing to accept food assistance programs, but they do not have the technical capability of accepting the cards, or they do not know how to register to be part of the vendor system.

To increase per capita consumption of fresh, locally grown foods in Oklahoma, researchers determined that producers' promotion activities need to focus on the following items:

- Highlighting their product attributes, including freshness and quality, rather than lowering their prices
- Using popular media for

promotional activities to make consumers aware of their location and the products offered

- Installing credit card machines to facilitate credit card shoppers and participants in government assistance programs such as SNAP (Supplemental Nutrition Assistance Program, formerly known as food stamps), senior nutrition, and WIC (Women, Infants, and Children).

Impact

By identifying the barriers to consumer involvement in local food markets in Oklahoma, this project will have positive economic, environmental, health, and social impacts.

Educational materials generated by this study, including printed materials, workshops, and forums, will help address structural imbalances in supply and demand, improve managers' success with consumer promotion and participation, improve the marketing success of producers, and increase consumer participation in local food markets in Oklahoma.

Ultimately, the findings from this project are expected to contribute to the sustainability of agricultural and environmental systems, lead to a more affordable and healthier diet for Oklahoma citizens, and improve community food security.

Publications and Presentations

Henneberry, Shida and Carra Crow. "Improving Participation in Local-Food Markets: A Case Study of Oklahoma Consumers."

A poster presented at the 1st Joint EAAE/AAEA (European Assoc. of Agr. Econ/Agr. & Applied Econ Assoc.) Seminar, The Economics of Food, Food Choice, and Health, Freising, Germany, Sept 15-17, 2010 (Sept 16, 2010).

Carra Jayne Crow, "Improving Consumer Participation in Local Food Markets: A Case Study of Oklahoma Farmer's Markets" (master's thesis, Oklahoma State University 2010).

Sources of Funding

This study was partially funded



by the Hatch Project No. 02702 of the Oklahoma State University Agricultural Experiment Station and the Federal State Marketing Improvement Program from the Agricultural Marketing Service of the U. S. Department of Agriculture.

Contact

Shida Henneberry, Regents Professor
Department of Agricultural Economics
155 Ag Hall
Oklahoma State University
Stillwater, OK 74078-6055
405-744-9712
email: srh@oksate.edu

Oklahoma Food Cooperative: Membership Attitudes and Involvement Survey

The Oklahoma Food Cooperative (OFC) was established in 2003. Its purpose was to “sell Oklahoma grown and/or Oklahoma processed foods and non-food items, for the mutual benefit of its producer and customer members.”

The OFC’s intent was to “educate members, and the general public, regarding cooperative principles, the local food movement, its core values, and the practical implementation of these principles.” With that goal in mind, the OFC set out to become a marketplace for customer-members and producer-members.

Although the initial concept was based on a storefront (physical location) model with daily business hours, the OFC was actually established as a web-based order facilitation business with physical transactions taking place one day each month.

Ordering takes place in a given time window each month, after producers update their OFC web pages to inform members of their product availability and prices for that month.

Researchers

Dr. Rodney Holcomb, professor, C.B. Browning Endowed Professor, was part of a group of Robert M. Kerr Food & Agricultural Products Center



representatives who worked with the OFC on this research project.

Dr. Philip Kenkel, professor and Bill Fitzwater Cooperative Chair, also assisted on this project.

Issues

In 2010, the OFC had 150 supplier-members marketing mostly food products, although some suppliers market locally grown/manufactured pet products, health and beauty products, home décor items, and even apparel items.

More than 3,000 individuals constitute the OFC customer-membership, although many of these are infrequent purchasers of products.

The OFC board determined that an average month’s business is conducted by roughly 60 of the 150 producer-members (40%). Furthermore, monthly orders are received from an average of approximately 650 customer-

members, or slightly more than 20% of the membership.

The OFC board has noticed that some of their customer-members have never purchased any products through the cooperative, leading to speculation that some customer-members simply paid their membership fees as a show of support for the concept or for other altruistic reasons.

The OFC faces common cooperative management problems. After seven years of operation, the cooperative is still trying to establish its long-term sustainability. The OFC depends heavily on the use of incentivized volunteer labor to carry out its monthly supplier/customer transactions, yet still struggles to break even.

The OFC and its board members still lack a basic understanding of customer-member wants and needs and the significance of the co-op to the overall business volume of its producer-members.

Communication to members has always been viewed as a positive attribute of the cooperative, but little communication has been pursued or received from members.

Objective

The objective of this project was to gather the following information:

- Determine the factors driving customer-members’

participation in the OFC

- Assess the significance of the OFC as a marketing outlet to producer-members

Project

The OFC board members and representatives of the Robert M. Kerr Food & Agricultural Products Center at Oklahoma State University developed surveys for both customer-members and producer-members during the summer of 2010. The survey process took place in the fall of 2010.

The OFC provided a complete list of all active and non-active cooperative members' email addresses for the purposes of this study.

Results

The survey findings show the similarities and sometimes the significant disparities between the OFC's customer-members and producer-members.

The findings also indicate the alternative market outlets where these OFC members may also be transacting business, including farmers' markets, other food cooperatives, and specialty food stores.

Impact

All of the information in the survey findings was formerly unknown by the OFC board of directors, and many of the findings were a surprise to the board. A report made to the OFC board contains valuable information for future planning and strategies.

Scope of Impact

The structure and performance of local food supply ventures

have not been extensively studied, although the increasing number of such ventures has warranted some recent work by the USDA. However, the



OFC's status as a blueprint for other local food cooperative efforts means the impact of this study will

be broadly recognized. Impacts should be greatest in two primary areas:

1. Classroom and outreach case

studies: The OFC is both a first-of-its-kind local food cooperative and the most documented food cooperative in the U.S. The unique insight provided by the surveys make this study the most insightful and current analysis of these cooperatives nationwide.



2. Recognizable impact on other ventures: The OFC can be directly traced to the development of more than a dozen similar ventures in the US and at least two such cooperatives in Ontario, Canada.

The cooperative's relatively simple and inexpensive operating structure has made it the blueprint of choice for efforts in the neighboring states of Texas, Kansas, and Colorado. But, the OFC has also been used as the basis for forming local food cooperatives in states such as Massachusetts,

Michigan, and Iowa. Thus, the results of this study will be keenly viewed by these and other efforts.

Presentations and Publications

The findings of this project were delivered in a report to the OFC board of directors. This report will be used to identify issues to be addressed in strategic planning sessions.

The findings were also included in a paper presented by Holcomb and Kenkel at the 2011 Southern Agricultural Economics Association conference, "Factors Impacting Participation In and Purchases Made by Members of the Oklahoma Food Cooperative."

The paper developed for the SAEA conference will be further developed as a case study for use by other cooperative planners and agribusiness students.

Source of Funding:

This project was funded by the Charles B. Browning Endowment for Food Science, with additional support provided by the Robert M. Kerr Food & Agricultural Products Center.

Contacts

Rodney B. Holcomb, Professor
C.B. Browning Endowed Professor
Department of Agricultural Economics
114 Food & Agricultural Products Center
Oklahoma State University
Stillwater, OK 74078-6055
Phone: 405-744-6071
Email: rodney.holcomb@okstate.edu

Philip Kenkel, Professor
Bill Fitzwater Cooperative Endowed Chair
Department of Agricultural Economics
516 Ag Hall
Stillwater, OK 74078-
Phone: 405-744-9818
email: phil.kenkel@okstate.edu

Helping Program Expansion and Improving Efficiency of the Oklahoma Farm-to-School Food Program

Farm-To-School (FTS) programs have gained national recognition and policy support since the original 1996-1997 pilot projects

activities included 48 states, involving approximately 9,756 schools and 2,255 school districts.

locally grown fresh fruits and vegetables in schools:

1. Accessing sufficient local produce
2. Assuring compliance with schools' food safety protocols
3. Providing effective and economical distribution methods of farm produce to the schools



were implemented by schools in California and Florida.

FTS programs connect schools with local farms, allowing school food service directors to purchase produce from local farmers. The program aims to help farmers by promoting the consumption of local produce and expanding market opportunities. At the same time, FTS programs are expected to impact trends in childhood obesity and diabetes by increasing the number of fresh fruits and vegetables in school meals; thus improving child nutrition while decreasing caloric intake.

In 2011, according to the National FTS Network, FTS

Researchers

Dr. Rodney Holcomb, professor, C.B. Browning Endowed Professor

Anh Vo, agricultural economics PhD graduate currently with USDA-NASS in Florida, assisted with this project.

Issues

The expansion of FTS programs in most states, coupled with schools' efforts to provide more nutritious and healthier unprocessed options for students, have increased the demand for locally grown fresh fruits and vegetables.

However three issues have hindered efforts to provide more

Objectives

The objectives for this project were to determine the following information:

- The potential for FTS program expansion in Oklahoma
- Food safety requirements and expectations for fresh produce delivered to schools
- Farmer-related issues with FTS participation

Project

Over a span of 18 months, the following activities were performed:

- School nutrition programs were surveyed to assess their willingness to participate in a FTS program and their requirements for receiving fresh fruits and vegetables.
- The foodservice distributors who deliver to school systems were surveyed regarding their produce procurement and handling requirements.
- Current farmer-suppliers of the Oklahoma FTS program were interviewed to determine issues that

new farmer-suppliers would need to consider before participating in FTS.

- Individuals in FTS program in other states were interviewed.

Results

The results of surveys and interviews were incorporated into a FTS “how to” manual, associated food safety materials,

- Farm to School Distribution Cost Template, available at http://www.okfarmtoschool.com/resources/fts-distro-foodsafetymanual/Farm-To-School_Distribution_Cost_Template.xlsx

Impact

The printed FTS manuals have been distributed to school

nutrition programs throughout Oklahoma, and the Oklahoma Department of Agriculture, Food, and Forestry (ODAFF) has distributed the manuals to small fruit and vegetable producers and farmers’ market participants interested in marketing to the FTS program.

ODAFF and the Oklahoma Department of Education believe that having these useful “how to”

materials will change attitudes and improve the decision-making skills of both schools and farmers considering FTS program participation. These materials will also help increase the efficiency of distribution and decrease transaction costs between Oklahoma farmers and the schools receiving their produce.

Scope of Impact

This program was undertaken to help promote the efficient

expansion of the Oklahoma FTS program, but the format of the materials are general enough to serve as a valuable tool to other state FTS programs. The USDA, which partially supported this effort with a Federal-State Market Improvement Program (FSMIP) grant, intends to promote the manual nationally as a FTS instructional document.

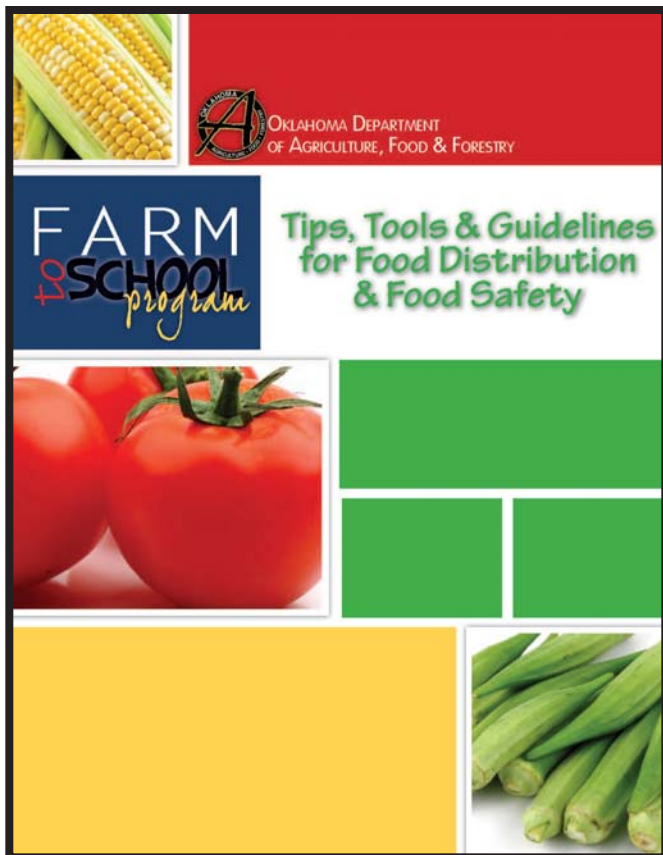
Presentations and Publications

Holcomb and Anh Vo presented the paper “Impacts of School District Characteristics on Farm-To-School Program Participation: The Case for Oklahoma” at the 2010 Food Distribution Research Society (FDRS) conference in Sandestin, Florida, on October 20, 2010.

Sources of Funding

The following sources provided funding for this project:

- USDA FSMIP grant
- Charles B. Browning Endowment for Food Science
- Oklahoma Cooperative Extension Service/Smith-Lever funds



and a distribution cost template:

- “Farm to School Program: Tips, Tools & Guidelines for Food Distribution & Food Safety”, available at <http://www.okfarmtoschool.com/resources/fts-distro-foodsafetymanual/fts-web.pdf>
- Food Safety Log and Worksheets, available at <http://www.okfarmtoschool.com/resources/fts-distro-foodsafetymanual/Food-Safety-Log-and-Worksheet-Templates.pdf>



Contact

Rodney B. Holcomb, Professor
C.B. Browning Endowed Professor
Department of Agricultural Economics
114 Food & Agricultural Products Center
Oklahoma State University
Stillwater, OK 74078-6055
Phone: 405-744-6071
Email: rodney.holcomb@okstate.edu

Economics Favors Monocultures of Productive Species Over Diverse Mixtures for Biomass Production

According to recent research published in the *Agronomy Journal*, “Before planting millions of hectares to switchgrass monocultures [growing a single species] for producing biomass feedstock for biorefineries, the proposal is that monocultures be tested against diverse mixtures so that, among other issues, the economics of both systems can be compared.”

This research was conducted to determine the lowest cost biomass feedstock production system among four monocultures and four diverse mixtures.

Researchers

Andrew Griffith, agricultural economics graduate student worked with Dr. Frances Epplin, professor and Jean and Patsy Neustadt Chair, and other researchers on this research project.

Issues

The U.S. Energy Independence and Security Act of 2007 (EISA) mandates that 36 billion gallons per year of biofuels be produced in the United States by 2022, with 21 billion gallons coming from feedstocks other than corn grain. Fulfilling this mandate may require the use of several feedstocks such as forest biomass, urban waste, and biomass from dedicated energy crops such as switchgrass.

Vast land areas would be required to produce the quantity of biomass required to fulfill the

EISA mandates. This land area could be seeded to a perennial grass monoculture such as



Switchgrass

switchgrass or alternatively to a mixture of grasses and forbs (broadleaf plants).

Minnesota ecology professor David Tilman conducted an experiment and concluded that a diverse mixture of plant species would result in a “...more reliable, efficient, and sustainable supply...” of biorefinery feedstock production than could be forthcoming from monocultures of switchgrass. However, some of the practices used by Tilman such as hand-weeding, would not be feasible in a commercial biomass production system.

A realistic test of the economics, performance, and persistence of diverse mixtures of grasses and forbs relative to the performance of a monoculture

such as switchgrass on a scale required to fulfill EISA mandates requires side-by-side field trials

managed as closely as possible to represent production on a large scale.

Objective

The objective of the research was to determine the most productive and lowest cost biomass feedstock production system for marginal lands in western Oklahoma from among three monocultures and four diverse mixtures that included diverse mixtures of grasses and forbs.

Project

Scientists at Oklahoma State University with the assistance of personnel and the contribution of land and other resources provided by the U. S. Department of Agriculture Agricultural Research Service, Southern

Plains Range Research Station, near Woodward, Oklahoma conducted a multiyear study at two locations.

Randomized complete block designs with four replications were established at each location. Plots were managed to represent anticipated production activities if perennial species were established in a low input system and harvested once a year to produce biorefinery feedstock. Plots were harvested once a year for three years.

The four monocultures included switchgrass, sand bluestem, Old World bluestem, and big bluestem. The four diverse mixtures included mixtures of four grasses, four grasses and four forbs, eight grasses and eight forbs, and Old World bluestem with alfalfa.

Results

The study found that biomass yields of diverse mixtures were no greater than yields of monocultures. Forbs did not persist in the plots. For every treatment that included a mix of species, a dominate grass species emerged by the third harvest, which suggests that over time, these treatments may not differ greatly from monocultures with minor representation of other species.

Researcher Agricultural Economics doctoral student Andrew Griffith who co-authored the study stated “The primary finding is that production costs were lower for monocultures because they produced at least as much, and in some cases more, biomass and had lower seed

costs.”

Samuel D. Fuhlendorf (Department of Natural Resource Ecology and Management) who designed and conducted the field research, stated “Diversity may be good in some settings. Diverse mixtures may reduce the risk of disease and pest damage. Society may place a higher value on the variable landscape and other attributes resulting from diverse mixtures relative to monocultures.



Sand Bluestem

However, if the objective is to produce massive quantities of biomass for biorefinery feedstock under the constraint that land area is limited, then for the conditions that prevailed at these locations during the time of the study, internal economics favored monocultures of productive species.”

Impact

The article published from this study was referenced and discussed in the U.S. Department of Energy’s August 2011 publication: U.S. Billion-Ton Update: Biomass Supply for a Bioenergy and Bioproducts Industry.

An article appeared in Obesity, Fitness, and Wellness Week June 11, 2011.

If an economically viable system is developed for converting biomass to biofuels, large quantities of biomass may be required. In Oklahoma, with current technology, monocultures of productive species are more economical than diverse mixtures. Attempts to establish and maintain diverse mixtures are likely to be expensive and not successful.

Presentations and Publications

Results from the study were published in the May-June 2011 issue of the Agronomy Journal.

Griffith, Andrew P., Francis M. Epplin, Samuel D. Fuhlendorf, and Robert Gillen. 2011. A comparison of perennial polycultures and monocultures for producing biomass for biorefinery feedstock. *Agronomy Journal* 103:617-627.

Continued on page 18

Contact

Francis M. Epplin, Professor and Jean and Patsy Neustadt Chair
Department of Agricultural Economics
416 Ag Hall
Oklahoma State University
Stillwater, OK 74078
Phone: 405-744-6156
E-mail: f.epplin@okstate.edu

Economic Effects of Genetic Marker Selection and Management in Beef Cattle

63.5% of Oklahoma farms and ranches produce cattle, and yet the challenge remains to know exactly which bulls to buy, which heifers to retain, and when to sell yearlings and feeder cattle. Worse yet, at the end of the day the difficulty is knowing exactly how the steak will taste when it is still on the hoof.

In recent years, new genetic testing technologies have become available to help producers better address some of these challenges. By taking a hair or skin sample and sending it off to a lab, producers can have access to precise information about their cattle's DNA.

These services, however, are costly, with uncertainty as to how much one should be willing to pay for genetic testing services and how the information obtained from the tests might best be put to use.

Researchers

Dr. Jason Lusk, Professor and Willard R. Sparks Endowed Chair, and Dr. Eric DeVuyst, professor and research economist, worked

on this research project.

Issues

Advances in genetic testing technology have prompted members of the beef industry



to consider the effects of using genetic marker tests to improve selection and marketing of beef cattle.

Several companies such as Merial and Pfizer now offer and sell a host of genetic tests for beef cattle, but whether the benefits of using the tests exceed the costs is at present unclear.

Objectives

The objectives of this project were multifaceted. The overall objectives were to determine the economic value of genetic testing technologies to accomplish the following items:

1. Select, market, and sort feedlot cattle

2. Select replacement bulls and heifers
3. Improve meat tenderness in the beef supply chain

Project

During the project, the following activities were conducted.

- A statistical analysis was performed to determine the relative profitability of feedlot cattle with differing genetic markers.
- Statistical models were developed to determine the accuracy of commercial genetic testing services in predicting carcass characteristics.
- Models were created to use genetic information to predict feedlot cattle profitability when sold at differing numbers of days on feed and under different marketing methods
- A statistical analysis was performed to determine the effect of genetic markers on yearling bull sales prices.
- Bull buyers were surveyed to determine the value of genetic marker information.
- Consumers were surveyed to assess their views on using genetic testing technology to improve the type and amount of fat in beef.

- Genetic selection models were developed and coupled with an economic model of the beef supply chain to determine how selecting replacement bulls or heifers with certain genetics would affect meat tenderness and industry profitability.

Results

At present, using genetic markets to predict the optimal number of days to feed feedlot cattle, while somewhat valuable, does not appear worth the costs of the tests.

However, genetic tests taken months in advance are able to predict final carcass characteristics with a moderate to low degree of accuracy. Moreover, large differences exist between the most and least profitable feedlot cattle, and genetic testing technology might allow producers to select more profitable animals to feed.

In bull sales, Oklahoma bull buyers, as of yet, do not place much value on the information contained in genetic testing technologies when other information such as EPDs are already known. However, this research did not study tests for genetic diseases, hide color, and parentage, which are likely to be much more valuable to cow-calf producers.

Beef consumers:

Industry-wide genetic selection efforts to improve beef tenderness have the potential to increase aggregate demand for beef. Sufficient variability exists in the degree of tenderness in the beef supply herd, and tenderness is a trait that exhibits sufficient

degree of heritability, so that within a few years, significant improvements in steak quality can be obtained.

Impact

From the results of this project, the researchers determined that an industry-wide strategy to select bulls in the upper 30% of genetic merit of meat tenderness would result in increased profitability of \$9.60/head for feeder cattle and \$1.23/head for fed cattle in 20 years. The net present value of the genetic improvement program is estimated to produce economic benefits of \$7.6 billion.

A determination was also made that more than a \$60/head difference occurs in the profitability of animals with the best genetic markers compared to those with the worst markers.

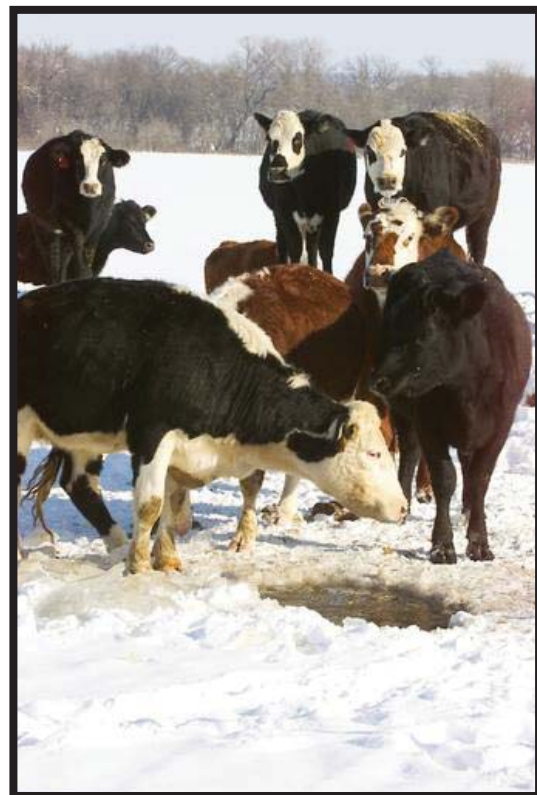
The models developed in this project to determine the value of genetic information to optimally sort cattle have been used by a number of the largest feedlots in the U.S.

Scope of Impact

The findings of this project have an impact nationwide in the U.S.

Presentations and Publications

Vestal, M., J.L. Lusk, E.A. Devuyst, and J.R. Kropp. "The Value of Genetic Information to Bull Buyers: A Combined Revealed, Stated Preference Approach." Working paper, Department



of Agricultural Economics, Oklahoma State University, 2011.

DeVuyst, E.A. "Igenity Panels and Economically-Relevant Traits," Presented at Oklahoma Cattlemen's Association Annual Conference at Cattlemen's College, Midwest City, OK, July 24, 2009.

Continued on page 18

Contacts

Jayson Lusk
 Professor and Willard Sparks Endowed Chair
 411 Ag Hall
 Dept. of Agricultural Economics
 Oklahoma State University
 Stillwater, OK 74078
 phone: 405-744-7465
 email: jayson.lusk@okstate.edu

Eric A. Devuyst
 Professor and Extension Economist
 530 Ag Hall
 Dept. of Agricultural Economics
 Oklahoma State University
 Stillwater, OK 74078
 Phone: 405-744-6166
 email: eric.devuyst@okstate.edu

2008 Farm Bill ACRE Program Analysis and Training

The Food, Conservation, and Energy Act of 2008 (the 2008 Farm Act) was enacted into law in June 2008. A key commodity provision allows producers to choose between the Direct and Counter-Cyclical Payment (DCP) Program and a new Average Crop Revenue Election (ACRE) program.

Researchers

Dr. Jody Campiche, assistant professor, was a key leader on the ACRE program analysis and training, which was part of an overall Farm Bill Education Program that also included Dr. Larry Sanders, professor, Dr. Mike Dicks, professor and Wes and Lou Watkins Chair, and Rodney Jones, OSU Area

Agricultural Economist in Enid, Oklahoma. Other OSU area and county educators were also involved in the project.

Issues

In 2008, Oklahoma producers received 141 million dollars in government payments under the DCP Program. Producers enrolled in the DCP Program may receive Direct Payments (DP), Counter-Cyclical Payments (CCP), and/or marketing loans. Producers who select the ACRE program will not be eligible for CCP payments and will receive a 20 percent reduction in direct payments and a 30 percent

reduction in marketing loans.

ACRE is a revenue assurance program designed to address some of the potential shortfalls of the DCP program by managing short-term declines in revenue.

The choice between ACRE and DCP is an important decision for farm profitability and risk management. However, while the calculations for DCP payments



are somewhat simple, the calculations for ACRE payments are much more complex.

Many Oklahoma producers were tempted to remain in the traditional DCP program simply due to a lack of understanding of the new options. The OSU Agricultural Policy team realized the potential benefits of the 2009 ACRE choice for Oklahoma wheat producers shortly after the April 2009 freeze since the ACRE option was designed to pay off when both state and individual farm-level revenues fell short of historical benchmarks. It became fairly apparent that the wheat crop would come in short of long-

term averages across the state.

The national average marketing year price for wheat was also declining from recent averages due to good wheat yields in other parts of the world.

Objectives

The objective of this study was to provide producers with information about the new ACRE program to help in evaluating their decisions on whether to enroll in DCP or ACRE and to help with the enrollment process.

Project

The ACRE educational program began after the 2008 Farm Act was signed into law in June 2008 and consisted of a multi-media, interdisciplinary, and inter-agency effort

led by Oklahoma Cooperative Extension Service (OCES) Agricultural Economics Faculty. Around 200 meetings were held across the state from May 2008 to December 2010 by State and Area Specialists and County Extension Educators to assist producers with the ACRE enrollment process.

Producers were provided with information about the new ACRE program. However, due to the complexity of the program, producers needed additional help to evaluate the decision to enroll in DCP or ACRE.

Specifically, they needed to calculate and compare potential

DCP and ACRE payments for their own farms to determine which program was the best choice for their operations.

A key factor in the education program was the development of the ACRE Decision Tool software that assisted producers in making the decision to enroll in the ACRE or DCP program. The ACRE decision tool was developed to perform the calculations necessary to estimate potential ACRE payments for the 2009-2012 crop years. Producers had the option to obtain assistance with the software from Extension Educators or to download the program on their own.

The decision tool was downloaded by producers and used by OCES county extension educators, Farm Service Agency county offices and other agricultural industry personnel.

OSU Extension personnel assisted producers across the State in deciding to enroll over 2,700,000 acres in the ACRE option, and also assisted producers in deciding against the ACRE option when it did not appear to be in their individual best interest.

Results

The 2009 ACRE sign-up ended on August 14, 2009. The tool was widely used by Oklahoma Area Extension Specialists, County Extension Educators, and producers. For the 2009 ACRE program, Oklahoma had one of the highest participation rates in the country with over 12,000 producers submitting over 60,000 farm applications. About 25% of eligible FSA contracts in Oklahoma were enrolled in the ACRE program, compared to

7.7% for the entire nation.

Impact

Producers received 2009 ACRE payments in November 2010. On average, ACRE enrollees collected over \$45.00 per acre in Federal payments for the

2009 crop year, compared to around \$15.00 per acre on acres enrolled in the DCP program. Overall, participating producers in Oklahoma received \$95 million in ACRE payments for the 2009 crop year, while losing about \$20 million in direct payments.

These results could lead to an estimated \$180 million increase in economic activity for Oklahoma (about 1.6% of the state GDP). Producers and federal agencies have expressed appreciation for the decision tool and willingness of county, area and state extension educators to work individually to understand the alternatives and consequences with objective, scientific information and tools.

Presentations and Publications

The results of this project were incorporated into three journal articles, one fact sheet, a decision tool, and a presentation at a professional meeting:

Campiche, J., M. Dicks, R. Jones, L. Sanders, D. Skipper, E. DeVuyst. "2008

Farm Bill Decision Tools." *Journal of Extension*, August 2010.

Campiche, J. and W. Harris. 2010.

"Lessons Learned in the Southern Region after the First Year of Implementation of the New Commodity Programs." *Journal of Agricultural and Applied Economics*, 42(3):1-19.

Briggeman, B.C. and J. L. Campiche. 2010. "The New ACRE Program: Costs and Effects." *The Main Street Economist*,

11:1-6.

Campiche, J. and M. Dicks. 2009. "Food Conservation and Energy Act of 2008: Commodity Program Choice." *Oklahoma State University Cooperative Extension Service*, AGEC-1011.

Campiche, J. and W. Harris. "What Have We Learned from the New Suite of Risk Management Programs of the Food, Conservation, and Energy Act of 2008?." Paper presented at the Southern Agricultural Economics Association Meeting, Orlando, Florida, February 2010.

ACRE decision tool, available at: http://www.agecon.okstate.edu/agpolicy/decisionTool_comm.asp

Sources of Funding:

- Smith-Lever
- Hatch



Contact

Jody Campiche,
Department of Agricultural Economics
528 Ag Hall
Oklahoma State University
Stillwater, OK 74078-6055
Phone: 405-744-6071
email: jody.campichi@okstate.edu

Applied research on water value and pricing in Oklahoma focused on agricultural, non-market, and municipal usage

The completion of the Oklahoma Comprehensive water planning process and the 2011 drought have brought water needs and the value of water to the forefront of Oklahoma's public policy debate.

Foreseeing an unfulfilled need for applied research on water value and pricing roughly five years ago, a group of agricultural economic faculty in research and extension focused on key areas of agricultural, recreational, and municipal values for water.

Researchers

This research project was broken down into four areas each headed by an agricultural economics faculty member:

- Agricultural value (Dr. Larry Sanders, professor)
- Non-market value-recreation (Dr. Tracy Boyer, Associate Professor)
- Municipal water conservation (Dr. Boyer)
- Municipal supply (Dr. Art Stoecker, associate professor)

Dr. Shannon Ferrell, assistant professor, also participated in this project.

Agricultural Economics graduate research assistants JoDee Schmidt and Michael Reilley assisted in this research.

Overall Issues

Natural resources and environmental amenities often suffer from overuse or

underprovision when property rights are poorly defined or markets fail to account for the value of natural services provided by goods. Conflicts between agricultural, municipal, industrial, recreational, and ecosystem uses are more frequent under scarcity when some uses are undervalued.

Although market uses of water are more readily apparent, such as the differences between irrigated and dry land wheat, non-market values such as recreational use when left unvalued are often counted as zero.

Understanding the opportunity cost of water is critical for managing it for its highest and best use at a societal level. In some cases, recreational uses might be higher than current market allocations and revenues from those uses are critical for rural development.

Overall Objectives

The overall objectives of these water projects is to gather information to help determine the value of water in Oklahoma

and develop a water pricing model.

Project Areas

Agricultural Value

Work Done

As a result of a grant from Oklahoma Department of Agriculture, Food and Forestry (ODAFF), the department water



team (Sanders, Stoecker, Boyer, and Ferrell) led a CASNR multi-agency group to develop a special chapter on agricultural water use for the new Oklahoma Comprehensive Water Plan (OCWP).

In summary, the chapter was a review of agricultural water use and potential opportunities to enhance economic well-being and ecosystem services for the people, habitat, and species of the state.

Water is life: all agricultural crops and livestock require ample access to water, and on a

consistent basis. The fact that the agricultural sector contributes \$20-28 billion to the state's annual economy makes this no small matter.

Water is potential: As a leader in many agricultural enterprises and agribusinesses, the state is poised for sector expansion, especially as population pressures on neighboring states forces limitations on their agricultural sectors.

Impact

Agriculture owns or manages 80% of the acres in Oklahoma, where most of the precipitation falls on Oklahoma. The managerial expertise and efficient practices of producers and landowners assures that the precipitation, the surface waters, and ground water provide not only sector profits, but a wide array of ecosystem services such as recharge, water quality, habitat, rural amenities, fishing, hunting, and other recreational activities.

The Oklahoma Water Resources Board will deliver the plan to the State Legislature and Governor for implementation of new legislation as deemed necessary.

Presentations and Publications

Products of the grant work have included presentations to the Oklahoma Governor's Water Conference, extension inservice education, a Rural Economics Conference, and an M.S. student's degree thesis and completion.

Non-market values

Recreational water-based activities are key for maintaining quality fishing and outdoor recreational sites for both quality

of life and for providing income opportunities in rural areas.

High quality water resources are essential to Oklahoma's fishing and hunting, and fundamental to outdoor recreation industries, which were responsible for generating nearly \$2.5 billion in 2006.



Streams, rivers, ponds, and reservoirs provide fishing, boating, and wildlife observation experiences for the state's residents, but they also attract nonresidents who pump money into the economy.

Work Done

As part of an Oklahoma Department of Wildlife Conservation (ODWC) grant to be completed at the end of 2011, preliminary estimates show that using mileage estimates of travel costs alone, anglers value the lower Mt. Fork fishery at \$434 per multiday trip.

Estimates of overall usage are forthcoming in fall 2011, but may prove substantially larger than those found for the lower Mt. Fork as may the economic impact to Oklahoma.

Impact

Recreational values and their economic impacts on the

economy are affected by changes in visitation and patterns of visitation which can be decreased lower lake levels and declines in water quality. For example, heat and lower lake levels are thought to contribute to blue green algal blooms currently affecting Oklahoma Lakes.

- Survey results for Tenkiller

Ferry Reservoir in 2006 show that campers are willing to pay \$10 per day at normal lake levels, with values declining with lower water levels, and \$12/day to know with certainty that there would be no algal blooms on any representative trip.

- An optimization model that illustrates the tradeoffs between municipal, hydropower, and recreational uses for Tenkiller Ferry Reservoir showed under conservative estimates of \$50/day for recreational users, managing the lake for all uses, including recreation would increase public benefits.

The results are interesting since neither municipal nor recreation were listed as primary uses when the dam was built. As expected, when recreational values

are directly included in the maximization of competing uses, gaining nearly 300 million dollars of additional value from the lake resource over the 50 year period is possible.

The gain in recreation values when the reservoir was explicitly managed to maintain visitors was 88 million dollars resulting in a reduction of \$26.6 million in municipal benefit and \$0.6 million in power generation.

- The relative magnitude of these recreational values for local economies and recreational users has made these uses more visible in the Oklahoma Statewide Comprehensive Water Planning Process.
- Values for individual lake recreation at public lakes have been obtained and have been made available from the Oklahoma Lake Study for small communities to use upon request.

Municipal Water Conservation

Issues

Continued increase in irrigated landscapes across the state will result in increased municipal water demand, which makes it important to determine current landscape irrigation practices and identify determinants of current irrigation practices used by Oklahoma turfgrass managers of athletic, golf, and park land.

Work Done

Three studies were undertaken to examine acceptability of price and nonprice controls on water to residential consumers, the

determinants of adoption of conservation among golf and park superintendents, and the willingness to pay for drought tolerant sod in newly built homes among builders and consumers.

Turfgrass Manager's Survey

A survey of 148 Oklahoma professional turfgrass managers solicited information on facility characteristics and management characteristics of the managers, and the likelihood of conservation adoption.

Because adoption exceeded 50% of respondents for only three types of water conservation strategies, a lack of motivation or incentive seems to exist on the part of Oklahoma turfgrass managers to participate in water conservation.

Even though respondents consider lowering facility watering costs to be an important motivation for adopting water conservation strategies, concern for maintaining performance and appearance of turfgrass for users overshadows those concerns as the most cited barrier to adoption.

Builder Survey

The builder survey examines the willingness to pay for drought tolerant turf and was conducted in July 2011.

Preliminary results show that consumers are hypothetically willing to pay more for drought tolerant turf in the purchase price, whereas builders are skeptical of consumers' willingness to pay for additional attributes such as drought tolerant turf in a home.

Although analysis is ongoing, publication and extension of results is expected in Fall 2011.

Lawn Irrigation Audit

As an extension output from this grant, a "Simple Irrigation Audit for Home Lawns in Oklahoma" was created to help homeowners in determining the output of their lawn irrigation system in inches per hour.

When paired with information on turf irrigation needs, regardless of turf type, this factsheet is expected to help consumers potentially lower or more accurately irrigate landscapes.

The audit can be seen at <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-7896/HLA-6610web.pdf>

Survey to Understand public perceptions of municipal water conservation tools

The main objective of this study



was to determine household water conservation preferences associated with drought constraints on municipal water supplies.

In Oklahoma in 2006 and in 2011, statewide drought has led to widespread municipal water shortages, forcing communities to adopt water short term conservation practices. These practices often took the form of watering bans.

However, cities could have adopted a wide array of market incentive or command and control measures including smart meters, temporary ordinances (restriction on watering times), changes in water rate structure, public information campaigns, rebates for drought tolerant landscaping, rebates for low-flow appliances, and home audits.

Because these water conservation techniques are often controversial and can be considered too restrictive, there an explicit need exists to determine homeowner preferences and understanding of these tools.

All homeowners were given information on the price and average expected efficacy of the different conservation tools. Results show social desirability or strategic bias against block pricing and preferences for the least effective policies. Results also showed that homeowners will choose less costly over more effective conservation tools, that is, they choose away from policies such as increasing block rates.

Impact

For policy makers, the

message from such results is that consumers can and do understand generally that pricing is the most effective form of reducing demand should cities have supply or treatment capacity shortages.

Depending on whether supply constraints are seasonal and weather or infrastructure related, managers can use these results to educate consumers on efficacy and policy options before implementation to fit the community needs.

Publications

Boyer, Tracy A., Shideler, David, and Long, J. Economic impact of the cold-water fishery in the Lower Mountain Fork River, January 1, 2010-December 31, 2011. U.S. Fish and Wildlife Service/Oklahoma Department of Fish and Wildlife.

Chandra, Ambika, Miller, Gradi (Principal PI's) Schwartz, Brian; Carrow, Bob; Waltz, Clint; Adams, Damian; Martin, Dennis; Unruh, J. Brian; McAfee, Jim; Moss, Justin; Kenworthy, Kevin, Nelson, Lloyd; Palma, Marco; Binzel, Marla; Raymer, Paul; Milla-Lewis, Susana; Boyer, Tracy; and, Wu, Yanqi (Project co-directors) Plant Genetics and Genomics to Improve Drought and Salinity Tolerance for Sustainable Turfgrass Production in the Southern United States. USDA Speciality Crops Initiative. Sept 2010-

2015. million.

Mahasuweerachai, Phumsith, Boyer, Tracy A., Balsman, Dane M. and Shoup, Daniel E. 2010. "Close to Home Fishing Program: Estimating Demand for Urban Fisheries Management " North American Journal of Fisheries Management . 30:1339-1351
Moss, J.C., Boyer, T.A. Adams, D.C., Smolen, M., Dennis, M. and Haase, J. 2009. "Water Conservation in Oklahoma's Urban and Suburban Watersheds through Modification of Irrigation Practices" Oklahoma Water Resources Research Institute. Project. March 1, 2010-February 28, 2010.

Michael Reilley, "Essays on Recreational Demand for Trout Fishing on the Lower Mountain Fork River and Municipal Water Conservation" (master's thesis, Oklahoma State University, 2011),

Continued on page 18

Contacts

Tracy A. Boyer, Assistant Professor
Department of Agricultural Economics
321 Agriculture Hall
Stillwater, OK 74078
(405) 744-6169
email: tracy.boyer@okstate.edu

Larry Sanders
Department of Agricultural Economics
509 Ag Hall
Oklahoma State University
Stillwater, OK 74078
phone: 405-744-9822
email: larry.sanders@okstate.edu

Art Stoecker
Department of Agricultural Economics
312 Ag Hall
Oklahoma State University
Stillwater, OK 74078
phone: 405-744-6165
email: art.stoecker@okstate.edu

Source of Funding

Support for this student training project was provided by USDA National Needs Graduate Fellowship Competitive Grant no. 2008-38420-04777 from the National Institute of Food and Agriculture. The authors also acknowledge the assistance of personnel and the contribution of land and other resources provided by USDA/ARS, Southern Plains Range Research Station, 2000 18th, Woodward, OK 73801.

Genetic Markers (Continued from page 11)

DeVuyst, E.A. "Gene testing of Cattle," presented at the Beef Quality Summit, Oklahoma State University, October 16, 2008.

DeVuyst, E.A. "Economics of Bovine Leptin Genotyping: Research Program," presented at Noble Foundation, Ardmore, OK, September 22, 2008.

DeVuyst, E.A., M. Bauer, Fu-Chih Cheng, J. Mitchell and D. Larson, 2008. "The Impact of Leptin Gene SNP 305 on Beef Calf Weaning Weights, *Animal Genetics* 39:284-286.

DeVuyst, E.A., J.T. Biermacher, J.L. Lusk, R. Mateescu, J.B. Blanton, Jr., J.S. Swigert, J.D. Springer, J.D. Donnell, B.J. Cook, and R.R. Reuter. "Relationships between Fed Cattle Traits and Igenity Panel Scores." *Journal of Animal Science*. 89(2011):1260-1269.

DeVuyst, E.A., J. Bullinger, M. Bauer, P. Berg and D. Larson, 2007. "An Economic Analysis

of Genetic Information: Leptin Genotyping in Fed Cattle," *Journal of Agricultural and Resource Economics* 32(2): 291-305.

DeVuyst, E.A., D.K. Lambert and M. Bauer, 2007. "Genotyping: What Applied Economists Should Know," *Western Economics Forum*, Fall, pp. 35-45.

Weaber, R.L. and J.L. Lusk. "The Economic Value of Improvements in Meat Tenderness by Genetic Marker Selection." *American Journal of Agricultural Economics*. 92(2010):1456-1471.

Lusk, J.L. and N. Parker. "Consumer Preferences for Amount and Type of Fat in Ground Beef."

Journal of Agricultural and Applied Economics. 41(2009):75-90.

Lusk, J.L. "Economic Value of Selecting and Marketing Cattle by Leptin Genotype."

Journal of Agricultural and Resource Economics. 32(2007):306-329.

Lusk, J.L. "Association of Single Nucleotide Polymorphisms in the Leptin Gene with BodyWeight and Backfat Growth Curve Parameters for Beef Cattle." *Journal of Animal Science*. 85(2007):1865-1872.

Sources of Funding:

The following sources supplied funding for this project:

- Hatch
- Noble Foundation
- Private sources (Pfizer, Merial)
- USDA CSREES National Research Initiative
- Willard Sparks Endowed Chair

Jodee Lynn Schmidt, "Determinants of Water Conservation Irrigation Practices: A Study of Park and Golf Turfgrass Management in Oklahoma (master's thesis Oklahoma State Univeristy 2011)

Presentations

Boyer, Tracy, "Valuing in-Stream Flows: Evidence in Oklahoma." Oklahoma Governor's Water Conference, Symposium presentation; October 27, 2010, Norman, OK.

Boyer, Tracy, "Micro-studies on Socio-WEconomics of Rurf Irrigation in Oklahoma." WRAB presentation, June 17, 2011

Reilley, Michael, Boyer, Tracy, and Adams, Damian, "Using best-worst scaling to understand public perception of municipal water conservation tools."

Poster presentation, Oklahoma Governor's Water Conference, seminar presentation; October 26-27, 2010, Norman, OK.

Sanders, L.D., Boyer, Tracy, et al., "Oklahoma Comprehensive Water Plan & Water's Role in Agriculture", 2010 Oklahoma Governor's Water Conference, seminar presentation; October 26, 2010, Norman, OK.

Deepayan, Debnath, Stoecker, Arthur, Boyer, Tracy, "Integrated Reservoir Management under Stochastic Conditions" North American Lake Management Society Meetings, Oklahoma City, OK November 3, 2010.

Sources of Funding:

These projects were funded by the Oklahoma Water Resources Research Institute, USGS, and the Oklahoma Water Resources Board.

"HOW MANY CHOICE SETS AND ALTERNATIVES ARE OPTIMAL? CONSISTENCY IN CHOICE EXPERIMENTS"

Authors: Tracy Boyer
Source: Agribusiness: An International Journal, 26 (2010)
Date: 2010

2008 FARM BILL DECISION TOOLS

Authors: Jody Campiche, Mike Dicks, Rodney Jones, Larry Sanders, Daniel Skipper, Eric DeVuyst
Source: Journal of Extension, 48
Date: 2010
Subject: Policy
Keywords: 2008 Farm Bill

A BEEF CATTLE RETENTION DECISION AID

Authors: Kellie Raper, Eric DeVuyst, Damona Doye
Source: Journal of Extension, Volume 48-4(August 2010):Article 4TOT6
Date: 2010
Subject: Marketing
Keywords: cow-calf, marketing, management

A NEED FOR SPEED? RURAL INTERNET CONNECTIVITY AND THE NO ACCESS/DIAL-UP/ HIGH -SPEED DECISION

Authors: Brian Whitacre, Bradford Mills
Source: Applied Economics, 42(15), 1889-1905
Date: 2010
Subject: Community & Rural Development
Keywords: rural broadband, nested logit, logit decomposition

ASSESSING COMPETITION IN THE US BEEF PACKING INDUSTRY

Authors: Clem Ward
Source: Choices, 2nd quarter 25(2)
Date: 2010
Subject: Marketing
Keywords: competition beef packing industry

BARGAINING OVER LOSSES

Authors: Jayson Lusk, Darren Hudson
Source: International Game Theory Review, Vol. 12, Pg 83-91
Date: 2010

CLOSE TO HOME FISHING PROGRAM: ESTIMATING DEMAND FOR URBAN FISHERIES MANAGEMENT

Authors: Tracy Boyer
Source: North American Journal of Fisheries Management , 30:1399-1351
Date: 2010
Keywords: close to home, conjoint, nonmarket valuation, angling

CONSUMER PREFERENCES FOR FARM ANIMAL WELFARE: RESULTS FROM A TELEPHONE SURVEY OF U.S. HOUSEHOLDS

Authors: Prickett Rob, Bailey Norwood, Jayson Lusk
Source: Animal Welfare, Vol. 19, pg. 335-347
Date: 2010
Subject: marketing, policy

DEMAND FOR FOOD GRAINS IN URBAN CHINA: A CROSS-SECTION ESTIMATION OF ECONOMIC AND DEMOGRAPHIC EFFECTS

Authors: Zhihao Zheng, Shida Henneberry
Source: Journal of Agricultural & Applied Economics
Date: 2010
Subject: International Trade and Development
Keywords: AIDS model, China food grain demand, China urban household demand

DIRECT VS. INDIRECT QUESTIONING: AN APPLICATION TO THE WELL-BEING OF FARM ANIMALS

Authors: Jayson Lusk, Bailey Norwood
Source: Social Indicators Research, Vol. 96, pg 551-565.
Date: 2010
Subject: marketing, policy, quantitative methods

DOES BROADBAND ACCESS IMPACT MIGRATION IN AMERICA? EXAMINING DIFFERENCES BETWEEN RURAL AND URBAN AREAS

Authors: Phumsith Mahasuweerachai, Brian Whitacre, Dave Shideler
Source: Review of Regional Studies 40(1): 5-26
Date: 2010
Subject: Community & Rural Development
Keywords: broadband, migration, spatial regression, treatment effects

ECONOMICS OF SWITCHGRASS AND MISCANTHUS RELATIVE TO COAL AS FEEDSTOCK FOR GENERATING ELECTRICITY.

Authors: Sijesh Aravindhakshan, Francis Epplin, C. M. Taliaferro
Source: Biomass and Bioenergy 34(2010):1375-1383.
Date: 2010
Subject: Production Economics
Keywords: biomass, bioenergy, switchgrass

EFFECTS OF INCOME AND SOCIAL AWARENESS ON CONSUMER WTP FOR SOCIAL PRODUCT ATTRIBUTES

Authors: David Ubilava, Ken Foster, Jayson Lusk, Tomas Nilsson
Source: Technological Forecasting & Social Change, Vol. 77. pg. 587-593
Date: 2010
Subject: agribusiness, environment, marketing

ESTIMATING A DEMAND SYSTEM WITH SEASONALLY DIFFERENCED DATA

Authors: Ardian Harri, Wade Brorsen, A Muhammad, J.D. Anderson
Source: Journal of Agricultural and Applied Economics, 42:321-335
Date: 2010
Subject: Marketing, Quantitative Methods
Keywords: demand, econometrics

FACTORS INFLUENCING ECONOMIC PROFITABILITY OF SAMPLING-BASED INTEGRATED PEST MANAGEMENT OF WHEAT IN COUNTRY ELEVATORS

Authors: Brian Adam, M. Siaplay, Paul Flinn, Wade Brorsen, Thomas Phillips
Source: Journal of Stored Products Research, 46
Date: 2010
Subject: Agribusiness, Grades and Standards
Keywords: integrated pest management, economics, grain elevators, costs and benefits, fumigation

FARMING AND THE INTERNET: REASONS FOR NON-USE

Authors: Brian Briggeman, Brian Whitacre
Source: Agricultural and Resource Economics Review, 39(3): 571-584
Date: 2010
Subject: Agribusiness, Community & Rural Development
Keywords: farming, internet, multinomial logit

FOOD AND CONSUMER ECONOMICS

Authors: Laurian Unnevehr, Jim Eales, Jayson Lusk, Jill McCluskey, Jean Kinsey
Source: American Journal of Agricultural Economics, Vol. 92, pg. 506-521
Date: 2010
Subject: marketing, policy

FREQUENCY OF MANURE APPLICATION IN ORGANIC VERSUS ANNUAL APPLICATION OF SYNTHETIC IN CONVENTIONAL VEGETABLE PRODUCTION

Authors: Vince Russo, Merritt Taylor
Source: HortScience, Vol 45(11): 1673-1680
Date: 2010
Subject: Horticulture
Keywords: manure organic vegetable production

HOUSEHOLD FOOD DEMAND BY INCOME CATEGORY: EVIDENCE FROM HOUSEHOLD SURVEY DATA IN URBAN CHINA

Authors: Zhihao Zheng, Shida Henneberry
Source: Agribusiness: an International Journal
Date: 2010
Subject: International Trade and Development
Keywords: urban China food demand by income category, LinQuad model

HOW MANY CHOICE SETS AND ALTERNATIVES ARE OPTIMAL? CONSISTENCY IN CHOICE EXPERIMENTS

Authors: Chanjin Chung, Tracy Boyer, Sungill Han
Source: Agribusiness: An International Journal, 26(2010)
Date: 2010
Subject: Agribusiness

INFLUENCE OF CORN GLUTEN MEAL ON SQUASH PLANT SURVIVAL AND YIELDS

Authors: Charles Webber, James Shrefler, Merritt Taylor
Source: HortTechnology, 20(4)
Date: 2010
Keywords: corn gluten meal squash plants

LESSONS LEARNED IN THE SOUTHERN REGION FOLLOWING THE FIRST YEAR OF IMPLEMENTATION OF THE NEW COMMODITY PROGRAMS

Authors: Jody Campiche, Wes Harris
Source: Journal of Agricultural and Resource Economics, 42
Date: 2010
Subject: Policy
Keywords: 2008 Farm Bill

LONG-RUN EFFECTS OF FALLING CELLULOSIC ETHANOL PRODUCTION COSTS ON THE AGRICULTURAL ECONOMY

Authors: Jody Campiche, Henry Bryant, James Richardson
Source: Environ. Res. Lett. 5 (2010) 014018
Date: 2010
Subject: Environment, Policy
Keywords: ethanol

MULTIDIMENSIONAL TESTS FOR DIFFERENCES IN ECONOMIC BEHAVIOR ACROSS CULTURES

Authors: Mariah Ehmke, Jayson Lusk, Wally Tyner
Source: Journal of Socio-Economics, Vol. 39, pg. 37-45
Date: 2010
Subject: international trade and development, policy, quantitative methods

OPTIMAL GRAZING TERMINATION DATE FOR DUAL-PURPOSE WINTER WHEAT PRODUCTION

Authors: Karen Taylor, Francis Eppin, Wade Brorsen, Brian G. Fieser, Gerald Horn
Source: Journal of Agricultural and Applied Economics, 42-1:87-103.
Date: 2010
Subject: Production Economics
Keywords: dual-purpose, first hollow stem, plateau function, stocker cattle, value of information, wheat

OPTIMAL LENGTH OF MOVING AVERAGE TO FORECAST FUTURES BASIS

Authors: Robert B. Hatchett, Wade Brorsen, Kim Anderson
Source: Journal of Agricultural and Resource Economics , 35:18-33
Date: 2010
Subject: Marketing
Keywords: basis, grain, moving averages

OTHER-REGARDING BEHAVIOR AND TAXPAYER PREFERENCES FOR FARM POLICY

Authors: Brenna Ellison, Jayson Lusk, Brian Briggeman
Source: B.E. Journal of Economic Analysis & Policy, Vol. 10, Article 96
Date: 2010
Subject: policy

PREDICTION MARKETS: AN EXPERIMENTAL APPROACH TO FORECASTING CATTLE ON FEED

Authors: Karina Gallardo, Wade Brorsen, Jayson Lusk
Source: Agricultural Finance Review, 70:414-426
Date: 2010
Subject: Marketing, Quantitative Methods
Keywords: cattle, forecasting, prediction market

PROFIT MARGIN HEDGING

Authors: H. S. Kim, Wade Brorsen, Kim Anderson
Source: American Journal of Agricultural Economics, 92:638-653
Date: 2010
Subject: Marketing
Keywords: futures markets, marketing strategies

RURAL BROADBAND AVAILABILITY AND ADOPTION IN OKLAHOMA

Authors: Brian Whitacre
Source: Choices 25(4)
Date: 2010
Subject: Community & Rural Development
Keywords: broadband adoption, rural broadband availability, broadband infrastructure, broadband digital divide

STATED AND REVEALED PREFERENCES FOR ORGANIC AND CLONED MILK: COMBINING CHOICE EXPERIMENT AND SCANNER DATA

Authors: Kathleen Brooks, Jayson Lusk
Source: American Journal of Agricultural Economics, Vol. 92, pg. 1229-1241
Date: 2010
Subject: Marketing, Policy, Quantitative Methods

TAXPAYER BELIEFS ABOUT FARM INCOME AND PREFERENCES FOR FARM POLICY

Authors: Brenna Ellison, Jayson Lusk, Brian Briggeman
Source: Applied Economic Perspectives & Policy, Vol. 32, pg 38-354
Date: 2010
Subject: Policy

THE COST OF COEXISTENCE BETWEEN BT MAIZE AND OPEN-POLLINATED MAIZE VARIETIES IN LOWLAND COASTAL KENYA

Authors: Emmanuel Tumusiime, Jeffrey Vitale, Hugo DeGroot, Brian Adam
Source: AgBioForum, 13(3)
Date: 2010
Subject: Production Economics

THE DEMAND FOR IMPORTED CHEESE IN MEXICO

Authors: Miguel Ramirez, Kraig M. Jones, Juan Francisco Arellano-Vaca, Kellie Raper
Source: Journal of Food Products Marketing, Volume 16-4(2010):418-429
Date: 2010
Subject: International Trade and Development, Marketing
Keywords: demand systems, cheese, agribusiness

THE DIFFUSION OF INTERNET TECHNOLOGIES TO RURAL COMMUNITIES: A PORTRAIT OF BROADBAND SUPPLY AND DEMAND

Authors: Brian Whitacre
Source: American Behavioral Scientist, 53 (9): 1283-1303
Date: 2010
Subject: Community & Rural Development
Keywords: internet, rural, broadband, micro/metro

THE ECONOMIC VALUE OF IMPROVEMENTS IN MEAT TENDERNESS BY GENETIC MARKER SELECTION

Authors: Robert Weaber, Jayson Lusk
Source: American Journal of Agricultural Economics, Vol. 92. pg. 1456-1457.
Date: 2010
Subject: Marketing

THE EFFECT OF PROPOSITION 2 ON THE DEMAND FOR EGGS IN CALIFORNIA

Authors: Jayson Lusk
Source: Journal of Agricultural and Food Industrial Organization, Vol. 8, Iss. 1, Article 3
Date: 2010
Subject: Marketing, Policy

THE IMPACT OF CHANGES IN INCOME DISTRIBUTION ON CURRENT AND FUTURE FOOD DEMAND IN URBAN CHINA

Authors: Zhihao Zheng, Shida Henneberry
Source: Journal of Agricultural and Resource Economics
Date: 2010
Subject: International Trade and Development
Keywords: income distribution, China food demand, urban income inequality

THE LONG RUN AND SHORT RUN IMPACT OF CAPTIVE SUPPLIES ON THE SPOT MARKET PRICE: AN AGENT-BASED ARTIFICIAL MARKET

Authors: Tong Zhang, Wade Brorsen
Source: American Journal of Agricultural Economics, 92:1181-1194
Date: 2010
Subject: Marketing
Keywords: agent-based market, captive supplies, cattle, industrial organization, particle swarm optimization

THE MARKET AND INFRASTRUCTURE PERSPECTIVE: REPLY

Authors: Brian Whitacre
Source: Annals of Regional Science 45(1), p. 239-243
Date: 2010
Subject: Community & Rural Development
Keywords: broadband, infrastructure, adoption, diffusion

THE NEW ACRE PROGRAM: COSTS AND EFFECTS

Authors: Brian Briggeman, Jody Campiche
Source: Main Street Economist
Date: 2010
Keywords: ACRE

THE PRICE OF HAPPY HENS: A HEDONIC ANALYSIS OF RETAIL EGG PRICES

Authors: Jae Bong Chang, Jayson Lusk, Bailey Norwood
Source: Journal of Agricultural and Resource Economics, Vol. 35, pg. 406-423
Date: 2010

THE STRUGGLE FOR BROADBAND IN RURAL AMERICA

Authors: Lori Dickes, David Lamie, Brian Whitacre
Source: Choices 25(4)
Date: 2010
Subject: Community & Rural Development
Keywords: broadband, digital divide, economic development, infrastructure, rural development

THE VALUE OF A NUTRITIONALLY ENHANCED STAPLE CROP: RESULTS FROM A CHOICE EXPERIMENT CONDUCTED WITH ORANGE-FLESHED SWEET POTATOES IN MOZAMBIQUE

Authors: Abdul Naico, Jayson Lusk
Source: Journal of African Economies, Vol. 19, pg. 536-558
Date: 2010
Subject: International Trade and Development, Marketing

VALUES OF QUALITY ATTRIBUTES IN THE KOREAN BEEF MARKET: IDENTIFYING SOURCES OF HETEROGENEITY

Authors: Chanjin Chung
Source: Annals of Korean Studies, 11(2010)
Date: 2010
Subject: Agribusiness

WELFARE EFFECTS OF FOOD LABELS AND BANS WITH ALTERNATIVE WILLINGNESS TO PAY MEASURES

Authors: Jayson Lusk, Stephan Marette
Source: Applied Economic Perspectives & Policy, Vol. 32, pg. 319-337
Date: 2010
Subject: Policy

WELFARE IMPACT OF INFORMATION WITH EXPERIMENTS: THE CRUCIAL ROLE OF THE PRICE ELASTICITY OF DEMAND

Authors: Stephan Marette, Jayson Lusk, Jutta Roosen
Source: Economics Bulletin, Vol. 30, pg. 1585-1593
Date: 2010
Subject: policy

WHEAT STOCKER DEICSION TOOLS

Authors: Eric DeVuyst, Francis Epplin, Derrell Peel, Gerald Horn, Dave Lalman
Source: Eric A. DeVuyst, Journal of Extension 48
Date: 2010
Subject: Production Economics
Keywords: wheat stocker