



## WELCOME

Good things continue to happen in our Cotton Economics Research program, most of which we have tried to outline for you in these four pages. We are now operating with a newly-established Cotton Economics Research Institute, there are several new research projects, and we have participated in another year of the Beltwide Cotton Conferences. We think it is worth notice that of the 36 research papers presented at the Cotton Economics and Marketing Conference, 25% of them came from this program.

Among the other good things happening is the addition of three new faculty members to join the Department of Agricultural and Applied Economics, each of whom will be engaging in cotton economics research. Dr. Octavio Ramirez began in September, 1998, Dr. David Willis will start February 1, and Dr. Michael Livingston is due here in June, 1999.

This newsletter tries to provide very general, overview information. Please contact any of us if we can provide more details or answer questions. Many of our reports are on our web site (shown later), along with much other department information. Please visit us there as well.

— Don Ethridge ■

## RECENT STUDIES

### Texas-Oklahoma Producer Cotton Market

The 1997/98 Texas-Oklahoma producer cotton markets experienced a decrease in the average producer price of almost 5.5 cents/lb. from the previous marketing year. Overall, quality was generally high and differed little from the 1996 crop. The size of the 1997 crop increased significantly, while the amount of cotton available in the

spot market increased accordingly, contributing to the fall in prices. With the exception of strength, discounts for the 1997 crop decreased for every quality attribute, while premiums increased for every quality characteristic except staple.

This research was funded by the Texas State Support Committee and Cotton Incorporated. Contact Sukant Misra for more information.

### Producer Returns to Gin Lint Cleaning

This study examined the simulated net returns to gin lint cleaning in the Southern High Plains of Texas during the 1993, 1994, and 1995 crop years to determine the optimum number of lint cleanings in the gin plant. Net returns for five stripper harvested cotton varieties with different management practices, including the use of irrigation and a portable bur-extractor, were evaluated in this study. Results indicated that net returns were consistently higher for one lint cleaning in the gin plant for all of the management practices evaluated. It was found that producers lost about \$4.00/bale by lint cleaning cotton more than once.

This research was funded by the Texas State Support Committee and Cotton Incorporated. For more information contact Sukant Misra.

### Cotton Quality Price Differentials Paid by Textile Mills

This study investigates price discounts and premiums paid for cotton quality attributes by textile manufacturers for three US cotton producing regions. Data collected from textile firms in the 1997/98 marketing year (1997 crop) were used in hedonic price models to estimate the quality premiums and discounts for cotton from the South, Southwest, and San Joaquin Valley regions. The analysis found significant differences in price differentials across the regions under study for that year, with both premiums and discounts being generally less for

Texas-Oklahoma cotton than cotton from the other regions.

This research was funded by Cotton Incorporated and the Cotton Economics Research Special Item. For more information contact Don Ethridge.

#### **LEPA vs. Drip Irrigation in the Texas High Plains**

The objective of this study was to determine the economics of adopting LEPA versus Sub-surface Drip Irrigation (SDI) for cotton production in the Texas High Plains. Economic budgeting was used to compare the levels of expected net revenues to management and risk of twelve irrigation system and irrigation application strategies. Overall, it was found that even when irrigation under SDI was found to result in higher cotton lint yields, the economics of its adoption would not necessarily be as profitable as adopting LEPA. This result occurs because the current cost of custom SDI installation is greater than from LEPA. However, both systems resulted in positive revenues to management and risk, except for one case under SDI.

This research was funded by Texas State Support Committee and Cotton Incorporated. For more information contact Eduardo Segarra.

#### **Impacts of Electric Power Deregulation on the Texas High Plains Economy**

The deregulation of the electric industry in Texas is currently being addressed by the Texas legislature. There are concerns that not all segments of the consuming public will benefit from deregulation, in particular the agricultural industry in the Texas High Plains (THP) Region, which is a major consumer of electricity for irrigation. This study was conducted on a 19 county area of the THP Region. Results indicated that the production value of the four crops in the study declined by \$13 and \$22 million under 30% and 50% rate increases, respectively. Farm level impacts were more significant indicating a 40% reduction in per acre net return for irrigated cotton production when electricity was the irrigation fuel used under a 30% electric rate increase in Hale County.

This research was funded by Texas Tech University, High Plains Underground Water Conservation District #1, and several electric utility companies. Contact

Phillip Johnson for more information. ■

### **NEW RESEARCH PROJECTS**

#### **Evaluating Insurance Products as Risk Management Tools for Texas Cotton**

The overall objective of this research is to evaluate the effectiveness of various crop and revenue insurance products as risk management tools for Texas cotton producers. Funding from Cotton Economics Special Item. Period: 1998-00. For more information contact Sukant Misra.

#### **Comparing Costs of Alternative Cotton Harvesting Systems in Texas**

The objective of this research is to evaluate performance and cost effectiveness of selected cotton harvesting systems in Texas. Funding from Cotton Incorporated. Period: 1998-99. For more information contact Sukant Misra.

#### **A Marketing Strategy for Cotton Producers Based on Mean Reversion in Cotton Futures Prices**

The objectives of this research are to: (1) test cotton futures prices for mean reversion (tendency of prices to revert to the mean), and (2) develop and test a marketing strategy (based on mean reversion) to increase producer returns. Funding from Cotton Incorporated and the Texas State Support Committee. Period: 1999. Contact Emmett Elam for more information.

#### **Management Strategies for Optimum Input Use, Yields and Quality of Cotton in the Texas High Plains**

The objectives of this research are to determine and quantify how cotton production system variables individually and collectively affect cotton yields and quality attributes; and to develop general optimization (input use) prescriptions for alternative resource situations. Funding from the International Cotton Research Center. Period: 1998-99. For more information contact Octavio Ramirez. ■

### **RECENT ACTIVITIES**

#### **CER Institute Formed**

The Cotton Economics Research Institute was approved in 1997/98, and is being activated in 1998/99. The

Institute is housed in the Department of Agricultural & Applied Economics, under the administration of the College of Agricultural Sciences and Natural Resources. Its current Director is Don Ethridge. The Institute provides an institutional structure for the CER program, which will continue with its Advisory Committee to assist with keeping the program focused on issues relevant to the State and the cotton industry. The committee members represent different industry segments and other research groups. In addition, they give advice in the administration and management of the program.

### **Advisory Committee Meeting**

The Cotton Economics Research Advisory Committee (Carl Anderson, Tommy Fondren, Curtis Griffith, Robert Joseph, Darryl Lindsey, James Supak, Dan Upchurch, and Tony Williams) met on October 9, 1998. Principal Investigators gave oral reports on projects, and the committee met with students working on Cotton Economics projects. Dean John Abernathy met with committee and Associate Dean Robert Albin joined the meeting as the major events of the previous year were reviewed. The committee closed with their remarks and recommendations for the CER program.

### **Annual Report of Cotton Economics Research During 1997/98**

The department has produced the report of research activities and accomplishments for the last two consecutive years of funding of the Cotton Economics Research program by the Texas Legislature. If you are interested in receiving a copy, please call or write to the department. You can also access this report on our web page, [www.aeco.ttu.edu/publicationpage.htm](http://www.aeco.ttu.edu/publicationpage.htm).

### **Cotton Incorporated Representatives Visit the Department**

Tommy Valco, Director of Agricultural Research, and Jeanne Reeves, Associate Director of Agricultural Research, visited the department on August 18 and 19. They met with all faculty members working on Cotton Economics projects.

### **Presentation at BIG**

Don Ethridge made a presentation on "Producer Risks Associated with Market Price Information" at the Blackland Income Growth meeting in Waco on January 12.

The meeting was sponsored by the Texas Agricultural Extension Service.

### **FAPRI Baseline Review**

Octavio Ramirez and Don Ethridge attended the meeting of the Food and Agriculture Policy Research Institute (FAPRI) in Kansas City, MO, on January 14 and 15. FAPRI's 1999 preliminary projections for all major commodities, including cotton, were presented; their final projections will be available in February.

### **New Faculty Members**

We are excited to announce the arrival of two new faculty members. Dr. David Willis will join the department in February as an Assistant professor in Resource and Environmental Economics. Dr. Willis received his M.A. and Ph.D. degrees at Washington State University. Since that time, he has been working at Washington State as a post-doctoral research associate conducting research in the areas of production, resource and regional economics.

Dr. Michael Livingston will join the department in June as an Assistant professor in Agricultural Marketing. Dr. Livingston is completing his Ph.D. degree, at North Carolina State University.

### **Department Activities at the Beltwide Cotton Conferences**

Eleven faculty and students from the Agricultural & Applied Economics department attended the National Cotton Council's Beltwide Cotton Conferences in Orlando, held January 3 – 7, 1999. Papers and authors were:

DeDe Beaty and Phillip Johnson. "Analyzing the Expansion Abilities of Mid-Sized Cotton Farms on the Texas Southern High Plains."

Jane Bondurant and Sukant Misra. "The Texas Cottonseed Pricing Structure: An Analysis of the Impact of Demand and Quality Factors."

Kalyan Chakraborty and Don Ethridge. "Cotton Quality Price Differentials from the Textile Mill: An Update."

Kent Durham and Phillip Johnson. "Financial Viability

and Profitability of Cotton Farms in the Texas High Plains Following Enactment of the 1996 Fair Act.”

Emmett Elam and Mark Castleberry. “Demand for Cotton Gin Waste as a Roughage Ingredient in Cattle Feedlot Rations on the Texas High Plains.”

Kevin Hoelscher, Don Ethridge, and Sukant Misra. “Texas-Oklahoma Producer Cotton Market Summary: 1997/98.”

Kevin Hoelscher, Sukant Misra, and Don Ethridge. “An Estimated 1998 Texas-Oklahoma Pre-Season Price Schedule Based on Market History.”

Jeannie Nelson, Sukant K. Misra, Blake K. Bennett, and Gary Barker, USDA-ARS. “Maximizing Producer Net Returns to Gin Lint Cleaning.”

Eduardo Segarra and Lal Almas. “Adoption of Advanced Irrigation Technology: LEPA vs. Drip in the Texas High Plains.”

Man Yu and Eduardo Segarra. “Spatial Utilization of Phosphorous: Implications for Precision Agriculture Practices.”

## Web Site

### **Reminder:**

Information on current research projects and publications on cotton economics research in the Department of Agricultural and Applied Economics can be obtained through the department homepage at <http://www.aeco.ttu.edu>.

For more information on cotton economics research, contact the department at:

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