



WELCOME

Since the January *Update*, there has been a lot of activity in the Cotton Economics Research program. Much of it is summarized in this issue. Reviews of the program by the Legislature and the Texas Higher Education Coordinating Board have required considerable time during the Spring and Summer, but research progress continues. There are some exciting new upcoming research projects, which are explained briefly in the following pages.

We sincerely hope that the summary information we are providing in this newsletter is useful and keeps you informed of our activities in cotton economics research. We welcome your opinions, comments, and suggestions. Note the address, telephone numbers, and e-mail addresses shown, and please visit our web site.

—Don Ethridge

RECENT STUDIES

Economics of Soil Fertility Under Precision Agriculture: The Case of Phosphorous

Production agriculture is facing significant challenges such as escalating costs of production and increased public concern about the impacts of agricultural production on the environment. Traditionally, optimal fertilizer use in agriculture has assumed homogeneous fertility across a field. That is, optimal fertilizer input use decision rules do not account for fertility differences within fields. Precision farming recognizes fertility variability within fields and seeks to optimize variable input use under these conditions. In this study, the economics of alternative fertility levels with respect to phosphorous use in cotton production were evaluated. It was found that optimal phosphorus application levels can vary greatly when soil fertility with respect to phosphorous is low, and tend to be less variable when soil fertility with respect to phosphorus is high. These results are important in terms of the impacts of soil fertility towards minimizing cotton yield variability under precision agriculture practices. For more information contact Eduardo Segarra.

1997/98 Crop Report

A report of producer market activity for the Texas and Oklahoma 1997 crop is currently being prepared. This report will summarize the price, premium, and discount activity as estimated by the Daily Price Estimation System for these markets for the 1997/98 cotton marketing year. The 1997/98 marketing season was about two months longer than prior marketing seasons. Preliminary analysis of cotton sales for the 1997 crop year indicates a season-average producer price of 58.58 ¢/lb. for Texas and Oklahoma and season-average base prices of 58.07 ¢/lb. for both the West Texas and East Texas/Oklahoma. This was a decrease of about 5 ¢/lb. from the previous year. Average quality characteristics showed little change from the 1996 crop year. Discounts for staple length, micronaire, color grade, and leaf grade appear to have all decreased from those of the 1996 crop, while premiums for strength, leaf grade, and the first digit of the color grade appear to have increased slightly. These preliminary results are based upon a total of 1,332,438 bales comprising approximately 16,211 sales. Once the analysis is completed and the results are finalized, an official report detailing these results will be issued. This report should be due out by the end of the summer. For more information contact Sukant Misra.

NEW RESEARCH PROJECTS

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

This project is a collaborative effort between the Department of Agricultural and Applied Economics, the Department of Plant and Soil Sciences (PSS), and the International Textile Center. The project will focus on (1) estimation of production functions for cotton yields and quality, and (2) providing the basis for prescriptions for production practices for optimum input use, yields, and quality. The project will utilize the mass of agronomic field experiment data generated by PSS over the past 20+ years at Texas Tech. Two types of production function relationships will be examined - functions for yield and quality. These relationships will provide the basis to better understand the interactive effects of input and environmental variables on both cotton yields and fiber attributes. Fund-

ing from Congress through the International Cotton Research Center at Texas Tech. Period: 1998/99. For more information contact Phillip Johnson.

Standardized Performance Analysis for Multiple Enterprise Farms

This project is an extension of the work carried out over the past several years on testing and implementing an integrated production, marketing, and financial analysis program for enhancing farm level decision making. The results of the analysis performed for the 1995 and 1996 crop years have been reported at the Beltwide Cotton Meetings. Current work in the project is focused on expanding the number of participants and improving the software package. Funding from Cotton Incorporated, Texas State Support Committee. Cooperative with Texas Agricultural Extension Service. Period: 1999. For more information contact Phillip Johnson.

Developing a Cotton Processing Simulation Model

This project will develop an improved cotton processing quality simulation model. The existing GINQUAL ginning simulation model will be updated by incorporating recent experimental data and all the mathematical relationships in the model will be re-estimated. Funding and cooperation from USDA/ARS. Period: 1998/00. For more information contact Sukant Misra.

Pricing Analysis for HVI Market Reporting in Cotton

This project will continue the cotton pricing work at the producer level in Texas and Oklahoma. This study estimates the price, premiums, and discounts for cotton and reports the results on a daily basis to the cotton industry. Funding from Cotton Incorporated, Texas State Support Committee. Cooperation from Telcot, DTN Network, and Intelligent Cotton Market. Period: 1999. For more information contact Sukant Misra or Don Ethridge.

Development of a National Daily Price Information System for Cotton

This project will extend the Daily Price Estimation System, or DPES, which is already developed for the Southwest cotton production region, to the other market regions in the U.S. The national Daily Price Information System proposes to develop a system to estimate the price, premiums, and discounts for cotton at the producer level in each of the other market reporting regions in the U.S. and to report the results on a daily basis to the cotton industry. Funding from Committee for Cotton Research, Inc. Period: 1998/01. For more information contact Don

Ethridge or Sukant Misra.

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

This project will develop and test a marketing strategy based on mean reversion in cotton futures prices (i.e., a tendency for price, when disturbed from its equilibrium value, to revert back to the equilibrium). A mean reversion marketing strategy calls for selling futures when the price is above the equilibrium (historical mean) value. The anticipated futures profit supplements the revenue from the cash market. Funding from Cotton Incorporated, Texas State Support Committee. Period: 1999. For more information contact Emmett Elam.

Textile Manufacturers' Pricing of Cotton Quality Attributes

This project is collecting data on manufacturers' contracted purchases of cotton from across the U.S. and estimating the quality premiums and discounts, by production region, paid by the users of cotton. Funding from Cotton Incorporated. Period: 1998. For more information contact Don Ethridge. ■

RECENT ACTIVITIES

Presentations

On March 18, Don Ethridge and Darren Hudson (Mississippi State University) made a presentation on the relevance of accurate market price reporting to the CCC loan structure to the National Cotton Council's Loan Premium and Discount Task Force. The meeting was in Memphis, Tennessee.

On April 15, Sukant Misra made a presentation on cost/benefit analysis of burr extractors in cotton ginning at the GINSCHOOL, organized jointly by Cotton Incorporated and the USDA, in Lubbock, Texas.

Don Ethridge made a presentation on May 13 to the International Management Workshop, sponsored by the International Center for Arid and Semi-Arid Land Studies at Texas Tech, on the Ethiopian cotton and textile sector study.

On July 8, Don Ethridge made a presentation to the Texas Farm Bureau Summer Commodity Conference in Nacadoches, Texas. The presentation covered the cotton price structure in Texas and implications for price risk management.

Coordinating Board Reviews Cotton Economics Research Special Legislative Item

On June 3, a panel from the Texas Higher Education Coordinating Board visited the Texas Tech campus to review a group of Legislative special research items, including the Cotton Economics Research item. The review team had a previously submitted written report of activities and accomplishments of the program, and an oral presentation on the program was made to the group on June 3. Although a written report of the review has not been received, discussions with the review team indicate that the program received a favorable assessment.

New Faculty Member to Join AAEC Department in September

Dr. Octavio Ramirez will join the department in September. Dr. Ramirez has his M.S. and Ph.D. degrees from the University of Florida and has been working for several years at a research institute in Costa Rica. He will be teaching econometrics, as well as other courses, and plans to be active in the cotton economics research program. We look forward to his joining the department and the cotton research group.

Advisory Committee Member George Herron had surgery on March 20. There were later complications, and George remains in serious condition. Our thoughts and best wishes go to George and his family. ■

NEW PUBLICATIONS

Beddow, Jason, Emmett Elam, and Mario Lopez. "The Cotton Wizard: A Quantitative Decision Tool for Cotton Variety Selection." Cotton Ginning Journal. (1997-98): 48-53.

Bennett, B. K., and Sukant K. Misra. "A Decision Tool to Determine the Optimal Level of Lint Cleanings for Irrigated and Dryland Cotton." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 318-322.

Bennett, Blake, and Sukant K. Misra. "Determination of the Optimal Number of Lint Cleanings for Irrigated Cotton." Abstr., Journal of Agricultural and Applied Economics. 30(1998): 247.

Bondurant, Jane, and Don Ethridge. "Proportions of the Retail Dollar Received by Cotton Industry Segments: Selected Consumer Goods." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 306-311.

Castleberry, Mark, and Emmett Elam. "Production and Disposal/Utilization of Cotton Gin Waste from the Texas High and

Low Plains." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 1669-1674.

Ethridge, D. E., D. Hudson, and E. Segarra. "Relevance of Price Information to the Cotton Industry." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 325-329.

Ethridge, Don, and Darren Hudson. "Cotton Market Price Information: How it Affects the Industry." Journal of Cotton Science, 2 (No. 2, 1998): (http://www.jcotsci.org/1998/issue01/x_contemp/art01/page68.html)

Floek, Hope, and Don Ethridge. "How Textile Manufacturers Dealt With Sticky Cotton From the 1995 Crop." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 284-287.

Hoelscher, Kevin, Darren Hudson, and Don Ethridge. "Texas-Oklahoma Producer Cotton Market Summary: 1996/97." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 394-398.

Hoelscher, Kevin, and Don Ethridge. "How Much Does the Market Fear Stickiness? Evidence from the 1996 Crop Year." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 331-334.

Hudson, Darren, and Don Ethridge. "The Pakistani Cotton Industry: Impacts of Policy Changes." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 294-297.

Hudson, Darren, and Don Ethridge. "Policy Implications of an Export Tax: The Case of Cotton and Yarn in Pakistan." Abstr., Journal of Agricultural and Applied Economics. 30(1998): 232.

Karaky, Rabih H., Don Ethridge, and Hope Floeck. "Cotton Quality Price Differentials Paid by U.S. Textile Mills." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 370-373.

Misra, Sukant, and Don Ethridge. "Cotton Lint Debate: How Clean is Too Clean?" Cotton Farming Management, Feb. 1998, pp. 10, 12.

Nelson, J., Sukant K. Misra, B. K. Bennett, and A. Brashears. "A Cost/Benefit Analysis of Bur Extractors in Cotton Ginning." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 398-403.

Teal, Steve, R.T. Ervin and R.D. Mehta. "Economic Analysis of Cotton Textile Finishing Processes: Part I - Pretreatments." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp.739-743.

Teal, Steve, R.T. Ervin and R.D. Mehta. "Economic Analysis of Cotton Textile Finishing Processes: Part 2 - Aftertreatments." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp.743-747.

Yu, M., E. Segarra, and A. B. Onken. "The Economics of Soil Fertility Under Precision Agriculture: The Case of Phosphorus." 1998 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN, pp. 289-292.

Web Site

Reminder:

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

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