



WELCOME

This is the third issue of the update. Our purpose is to keep the public and the industry informed of our activities in Cotton Economics Research at Texas Tech University. Our mailing list has expanded to more than 1,000 people. If you know of someone who should receive it, please send us the information. Ways you can contact us are provided elsewhere in the newsletter.

—Don Ethridge

RECENT STUDIES

Economics of Dryland Farming Systems

Cotton production in the Texas High Plains region accounts for 15 to 20% of the total cotton production in the United States. About half of the cotton acreage in the region, between 1.25 and 1.6 million acres per year, is grown under dryland conditions. Much of this cotton production takes place under a monoculture type-conventional tillage production system. These practices are expensive and leave the soil vulnerable to wind and water erosion. Research of the AG-CARES facility in Lamesa, Texas, show that dryland conservation tillage systems can significantly increase cotton yields and profitability. In particular, a minimum tillage production system increased cotton yields over 50% and increased net returns above variable costs over 100% as compared to monoculture type-conventional tillage practices. Additionally, the minimum tillage dryland production system is no riskier than the conventional dryland production system.

This study was supported by the Cotton Economics initiative from the Texas Legislature and the Texas Agricultural Experiment Station. For more information contact Eduardo Segarra.

Economic Analysis of Cotton Textile Finishing Processes

An economic analysis was conducted on cotton textile

treatments designed for the coverage of neps while dyeing cotton yarns and fabrics in textile mills. Treatments considered included the use of chitosan and cellulase enzymes applied as either a pretreatment or an aftertreatment. Pretreatment benefits considered included reduced dye use and reduced rejection of fabrics, while the costs examined included the cost of the chitosan or enzyme, costs of associated chemicals, additional labor, and overhead costs. Results indicate that neither pretreatment is cost effective while both aftertreatments are cost effective for textile mills to adopt at this time. The pretreatments are not cost effective because all yarn and fabric destined for use in apparels are treated. However, aftertreatments allow for the treatment of only those fabrics already rejected due to the presence of neps.

This research was funded by the Cotton Economics initiative from the Texas Legislature. Contact Terry Ervin for more information.

Retail Dollar Distribution Among Cotton Industry Segments

A recent study examined the allocation of the retail dollar for six consumer goods among different segments of the cotton industry. The consumer goods analyzed included men's denim jeans, men's knit briefs, men's business shirts, women's sweat pants, terry towels, and woven bed sheets. The cotton industry was broken down into the following segments: farming, ginning, warehousing and handling, shipping and merchandising, textile mill processing and finishing, manufacturing and wholesaling, and retailing. The results show that the share of the retail dollar tends to increase as cotton moves through the marketing channel and accumulates value from processing, manufacturing, and distribution services. Although differences exist in the retail dollar distribution among the different cotton goods, the retail segment consistently receives over half of the final retail value of these consumer products.

This research was supported by the College of Agricultural Sciences and Natural Resources at Texas Tech University. Those interested in more information on this study should contact Don Ethridge.

Effects of Sticky Cotton on Manufacturing Costs and the Price of Old Crop Cotton

Identifying and understanding sticky cotton has been the focus of extensive efforts in research, which has been directed primarily toward prevention, measurement, and treatment. A survey of textile mills conducted by Hope Floeck and Don Ethridge was used to collect information on processing adjustments and costs resulting from sticky cotton. The study indicated that costs of processing increase as levels of stickiness increased and the presence of stickiness, not the level, determined what strategies were used to deal with stickiness. In a related analysis, Kevin Hoelscher and Don Ethridge used 1995 West Texas cotton, reputed to be sticky, selling in the 1996/97 market as a proxy to indicate the threat of stickiness. The 1995 crop cotton sold at an average discount of about 3 cents/lb. below the 1996 crop. It was concluded that the sticky reputation of the 1995 crop caused mills and buyers to discount the cotton in the 1996/97 market because of the threat of the cotton being potentially sticky.

This research was supported by Cotton Incorporated, Texas State Support Committee, and the College of Agricultural Sciences and Natural Resources. For more information contact Don Ethridge.

Gins Incur a Net Loss of About \$3.00 Per Bale of Cotton by Ginning Bur Extracted Cotton

A recently completed study examined the cost/benefits of bur extractors in cotton ginning. The findings of this study suggest that by ginning bur-extracted cotton, gin plants incur savings in the areas of transportation of modules, maintenance and repair of gin equipment and equipment components, energy, and labor totaling about \$6.00 per bale of cotton. However, gin plants lose about \$9.00 per bale of bur-extracted cotton under ginning charges designed for non-field cleaned cotton. Thus, a net loss of \$3.00 per bale is experienced by gin plants when cotton is stripper harvested using a bur extractor.

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

Cotton Wizard: A Cotton/Cottonseed Variety Selection Program

A cotton variety selection model has been developed to include both seed and lint components. The model is programmed as a user-friendly application (in the MS-Windows environment) that can be used by producers, breeders, and seed companies to evaluate the relative advantages and disadvantages of alternative varieties under different situations. The program requires that the user enter information on location, years under analysis, varieties to analyze, and components of analysis (lint yield and price, and/or seed yield and price). The software develops lint and seed prices based on lint and seed quality characteristics. Using the input information (including specified production costs), the program provides estimates of net revenue per acre and variability (risk) in net revenue to aid the decision maker in variety selection.

This research was supported by the Cotton Economics initiative from the Texas Legislature and the Cotton Foundation. For more information, contact Emmett Elam. ■

NEWS ON RESEARCH PROJECTS

Report of Cotton Economics Research During 1995/96 - 1996/97

The department has produced a report of research activities and accomplishments during the first two years of funding of the Cotton Economics Research funding from the Texas Legislature. Anyone wanting a copy can call or write for CER-97-16, or access the report on our web page, www.ttu.edu/~agecon/cotton.htm.

1995/1996 Gin Survey

A report entitled "Operational and Cost Characteristics of the Cotton Ginning Industry In the Southern High Plains of Texas" by Sukant K. Misra, Jennifer L. Phillips, and Brent D. McPeck is currently available. This report is based on a survey of gin managers that was administered in the spring of 1996, and presents information on important aspects of the ginning

industry for the 1995 season. Those interested in receiving a copy of this report contact Sukant Misra. ■

RECENT ACTIVITIES

Advanced Irrigation Technology

On December 11, 1997, Eduardo Segarra made a presentation on "Advanced Irrigation Technology Adoption: Impacts on Depletion" to the High Plains Ogallala Area Regional Management Plan Meeting. The economics of advanced irrigation technologies in cotton production were highlighted.

Advisory Board of the Institute for Research in Plant Stress

On July 15, 1997, Eduardo Segarra made a presentation on "Targeting Agricultural Research: The Role of Economic Analysis" to the Advisory Board of the Institute for Research in Plant Stress, Texas Tech University. The importance of economics research for the targeting of biotechnology research was highlighted.

Legislative Review of Special Research Funding

A review team from the Texas Legislature visited Texas Tech on October 28 and 29, 1997, to review all research special item funded projects; the Cotton Economics Research item was included. Don Ethridge presented an overview of the research thrusts and results from the first two years of work in Cotton Economics.

Reports to the Texas State Support Committee, Cotton Incorporated

Three department faculty who have research projects supported by Cotton Incorporated and the Texas State Support Committee reported on progress and results at their meeting in Dallas on December 9 and 10, 1997. Don Ethridge reported on the Daily Price Estimation System work, Sukant Misra on his harvesting/ginning research, and Phil Johnson on the Standardized Performance Analysis project.

Department Activities at the Beltwide Cotton Conferences

Fourteen faculty and students from the Agricultural & Applied Economics department attended the National Cotton Council's Beltwide Cotton Conferences in San Diego, held January 5 - 9, 1998. Papers and authors were:

Bennett, Blake K. and Sukant K. Misra. "A Decision Tool to Determine the Optimal Level of Lint Cleanings for Irrigated and Dryland Cotton."

Bondurant, Jane and Don Ethridge. "Proportions of the Retail Dollar Received by Cotton Industry Segments; Selected Consumer Goods."

Clark, April, Phillip Johnson, and James McGrann. "Standardized Performance Analysis of Cotton Production in the Texas High Plains."

Elam, Emmett and Mark Castleberry. "1997 Texas High Plains Gin Waste Assessment."

Ethridge, M. Dean. "Trends in the Textile Industry: Impacts on the Cotton Sector."

Floeck, Hope and Don Ethridge. "How Textile Manufacturers Dealt with Sticky Cotton From the 1995 Crop."

Hoelscher, Kevin and Don Ethridge. "How Much Does the Market Fear Stickiness? Evidence From the 1996 Crop Year."

Hoelscher, Kevin, Don Ethridge, and Darren Hudson. "Texas-Oklahoma Producer Cotton Market Summary: 1996/97."

Hudson, Darren and Don Ethridge. "The Pakistani Cotton Industry: Impacts of Policy Changes."

Hudson, Darren, Don Ethridge, and Eduardo Segarra. "Relevance of Price Information to the Cotton Industry."

Karaky, Rabih H. and Don Ethridge. "Cotton Quality Price Differentials Paid by U. S. Textile Mills, 1994-1996."

Nelson, Jeannie, Sukant K. Misra, Blake Bennett, and Alan Brashears. "Cost/Benefit Analysis of Bur Extractors in Cotton Ginning."

Teal, Steve G., R. T. Ervin, and R. D. Mehta. "Economic Analysis of Cotton Textile Finishing Processes. Part 1: Pretreatments."

Teal, Steve G., R. T. Ervin, and R. D. Mehta. "Economic Analysis of Cotton Textile Finishing Processes. Part 2: Aftertreatments."

Yu, Man, Eduardo Segarra, and Arthur B. Onken. "The Economics of Soil Fertility Under Precision Farming."

Dr. Emmett Elam demonstrated the Cotton Wizard variety selection program at the Cotton Improvement workshop at the Beltwide Cotton Conferences in San Diego on January 7, 1998. The Cotton Wizard is a cotton variety selection program that allows producers to compare alternative varieties under different situations.

Dr. Eduardo Segarra was chair of the 1998 Cotton Economics and Marketing Conference, which entailed organizing and chairing this year's sessions. Don Ethridge continues to serve as historian for that conference.

Advisory Committee Meeting

The Cotton Economics Research Advisory Committee (Carl Anderson, Roy Baker, Tommy Fondren, George Herron, Robert Joseph, and James Supak) met on September 18, 1997. Principal Investigators gave oral reports on projects, and the committee met with students working on Cotton Economics projects and reviewed project administration procedures.

Several committee workers attended the Department's faculty-sponsored annual Hot Dog Supper that evening, which is to welcome new and returning students to the new academic year. This advisory committee, including present and past members, has become an important asset to the Department and College for managing and administering the Cotton Economics Research program, and we wish to acknowledge their contributions.

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 www.ttu.edu/~agecon/cotton.htm.

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

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