



Cotton Economics Research Update

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Cotton Economics Research Institute

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Welcome

In the event that you may not already be aware, I want to note the breadth of the cotton economics research that is being done through the Cotton Economics Research Institute. Our research encourages all aspects of the industry, and this issue of The Update illustrates that very well. The summaries of recent studies in this issue lean somewhat to farm-level production topics, but the list of Beltwide Cotton Conference papers demonstrates a much broader range of topic areas. A still broader perspective can be obtained from our annual research report.

I would also like to refer you to our website (<http://www.aeco.ttu.edu/cerininstitute.htm>) for some new tools that we are developing and trying to make available as decision aids. Existing examples of them are the "Price Calculator" (an addendum to the "Daily Price Estimation System") and the "Cotton Harvesting Cost Calculator." If these tools sound interesting, please access and use them; if you do, let us know what you think (you might help us to improve them).

Don Ethridge

Recent Studies

Economic and Environmental Evaluation of Precision Farming Practices in Irrigated Cotton Production

Traditionally, optimal input use in agriculture has assumed homogeneity of crop fields, thus uniform input applications were made despite variation in soil fertility, pest population pressure, and other characteristics across fields. Precision farming recognizes the inherent variability of crop fields and seeks to optimize input use under these conditions. In this study, an economic and environmental evaluation of precision farming practices with respect to nitrogen use in

irrigated cotton production in the Southern High Plains of Texas was conducted. Results show that precision farming, as compared to uniform nitrogen use, would result in increased cotton lint yield and net returns on a per acre basis. Also, the methods and procedures developed in this study can be used to delineate specific management zones within fields.

This research was jointly funded by the Applied Economics Research Program, Texas Tech University, and Texas A&M University Precision Agriculture Initiative. For more information contact Eduardo Segarra.

The cost of Extrusion Processing of Cotton Gin Trash as a Livestock Feed Product: Preliminary Estimates

Extrusion processing can be used on cotton gin trash (CGT) to produce livestock feed (roughage) products. Using the economic-engineering approach, preliminary estimates of unit processing cost for CGT feed products were developed. Preliminary estimates suggest economies of size, with total process cost inside the plant building as low as \$9/ton.

This research was funded by the Multi-Disciplinary Research Enhancement Program, College of Agricultural Sciences and Natural Resources, Texas Tech University. For more information contact Emmett Elam.

Economic Thresholds For The Cotton Boll Weevil In The Texas High Plains

This study analyzes the economics of the cotton boll weevil control in the Texas High Plains. It suggests that the specific economic threshold used for deciding when to control boll weevil infestations can substantially impact farm-level profitability. The preliminary economic threshold (ET) recommendations advanced in this study are significantly different from current practice, which points to the need for further analyses. The results of the ET analyses are also used to evaluate the recently approved boll weevil eradication programs, concluding that farmers likely made an economically sound decision in approving these programs.

This research was jointly funded by the Applied Economics Research Program, Texas Tech University, and the Plant and Soil Science Research Program, Texas Tech University. For more information contact Octavio Ramirez.

Efficient Input Use in Irrigated Cotton Production with Quality and Yield Considerations

Production relationships for cotton lint yield, seed yield, and lint quality characteristics (e.g. micronaire, staple length, and fiber strength) are developed. The relationships are used to evaluate the effect of lint prices, seed prices, lint quality premiums/discounts, variable input costs, and weather conditions on a set of profit-maximizing crop management decisions involving variety, fertilized application method, and input (water/nitrogen and phosphorous fertilizer) use levels. Both expected returns and risk are considered in the analysis. We conclude that knowledge and consid-

eration of the effect of management decisions on lint quality can substantially increase profitability and reduce risk. Improved weather predictions would also result in better management decisions, higher profits and lower risk.

This research was funded by CSREESNSDA (through International Cotton Research Center, Texas Tech University.) For more information contact Octavio Ramirez.

Recent Activities

Advisory Committee Meeting

The Cotton Economics Research Advisory Committee (Carl Anderson, Carleton Davis, Curtis Griffith, Darryl Lindsey, Jayroy Moore, Dan Upchurch, Steve Verett, and Tony Williams) met on October 6, 2000. 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.

Second Annual Research/Extension Symposium on Cotton Economics Issues Scheduled for April 2001

The Cotton Economics Research Institute will be sponsoring the second annual research/extension symposium in April 2001 in collaboration with the Texas Agricultural Extension Service. The motivation behind this symposium is to 1) deliver important research results directly to selected agricultural extension scientists for further dissemination to the cotton industry and 2) provide an opportunity to our extension colleagues to evaluate the relevancy of our research activities and help shape the future research focus of the cotton economics research program.

For more information contact Sukant Misra or Don Ethridge.

Cotton Harvesting Cost Calculator is on the Web

A user-friendly web-based cotton harvesting cost calculator (HCC) has been developed to allow producers to estimate harvesting costs for specific equipment configuration or to compare costs of alternative harvesting equipment configurations. The HCC is currently on the web and can be accessed at: <http://www.aeco.ttu.edu/CER-Institute/CottonHarvesting/default.htm>.

This project was funded by Cotton Incorporated. For more information, contact Sukant Misra.

Annual Report of Cotton Economics Research During 1999-00

The department has produced a 1999/2000 annual report of research activities and accomplishments in Cotton Economics Research which is conducted within the Cotton Economics Research Institute at Texas Tech University. 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, <http://www.aeco.ttu.edu/CER-Institute/ANNUALweb.PDF>



Beltwide Cotton Conference Activities

Fifteen faculty and students from the Agricultural & Applied Economics department attended the National Cotton Council's Beltwide Cotton Conferences in Anaheim CA, held January 9-13, 2001. Papers and authors were:

Jeannie Nelson, Sukant Misra, and Alan Brashers. "Cost Comparison of UNR Versus Conventional Row Cotton: A Preliminary Analysis."

Man Yu, Eduardo Segarra, Hong Li, Robert J. Lascano, and Susan Watson. "Precision Farming Practices in Irrigated Cotton Production in the Texas High Plains."

Megan L. Denning, Octavio A. Ramirez, Carlos Carpio, Dean Ethridge, and Phillip Johnson. "Hedonic Profit Maximization of Irrigated Cotton Production Systems on the Texas High Plains."

Jason Ward, Kevin Hoelscher, Sukant Misra, and Don Ethridge. "An estimated 1999 Texas - Oklahoma Pre-Season Price Schedule Based on Market History."

Jeannie Nelson, Sukant Misra, Amar Devagouda, and Jeanne Reeves. "A Web Based Cotton Harvesting Cost Calculator."

Hong Li, Kevin Bronson, Robert Lascano, Jill Booker, Ted Wilson, and Eduardo Segarra. "Water and Nitrogen Balance of Cotton as Affected by Soil Texture and Topography."

Jim Ed Field, Sukant Misra, and Octavio Ramirez. "Are Current Crop And Revenue Insurance Products Meeting The Needs Of Texas Cotton Producers?"

Jeannie Nelson, Kevin Hoelscher, Sukant Misra, and Don Ethridge. "Texas - Oklahoma Producer Cotton Market Summary 1999/2000."

Carlos Carpio, Octavio Ramirez, and Scott Armstrong. "Profit Maximizing Economic Thresholds For The Cotton Boll Weevil In The Texas High Plains."

Marty Middleton, Emmett Elam, Weldon Laird, and Greg Holt. "Economic - Engineering Cost Analysis of a Full - Scale Gin Trash Extrusion Plant."

Jason Blackshear and Phillip Johnson. "Profitability Of Cotton Production In The Texas High Plains."

Daren Hudson and Don Ethridge. "The Marketing Loan: Is It Really Enhancing Exports?"

Hong Li, Kevin Bronson, Robert Lascano, Jill Booker, Edward Barnes, and Eduardo Segarra. "Cotton Reflectance Characteration and NDVI-Days Lint Yield Modeling."

Contact Information

Web Site and E-Mail Address

The Cotton Economics Research Institute now has a Web Site of its own. Information on current research projects, publications, activities, etc., can be obtained through this site at:

<http://www.aeco.ttu.edu/cer institute.htm>

The e-mail address for the Institute is:

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