

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
http://ageconsearch.umn.edu
aesearch@umn.edu

Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.

ANNUAL REPORT RESEARCH PROGRAM

2003/04

Department of Agricultural and Applied Economics College of Agricultural Sciences and Natural Resources Texas Tech University

September 2004

Compiled by

Don Ethridge, Eduardo Segarra, Phillip Johnson, Jaime Malaga, and Roderick Rejesus

TABLE OF CONTENTS

		Page	
General Summa	ary	1	
Cotton Econom	ics Research Institute	3	
Thornton Agric	ultural Finance Institute	7	
Risk Manageme	ent/Crop Insurance Initiative	8	
Center for North	h American Studies; Texas Tech Component	8	
Water Resource Economics Initiative			
Appendix A:	Annual Progress Reports	11	
	Business Models for Competitive Success in the Texas Textile Industry	13	
	Center for North American Studies (CNAS) – Texas Tech Component	14	
	Daily Price Analysis and Reporting for the Texas Oklahoma Cotton Market	15	
	Demand for U.S. Made Cotton Apparel and its Implications for the Cotton Industry	16	
	Developing Financial Derivatives to Mitigate Marketing Risks Under Grid Pricing for Fed Cattle Producers	17	
	Development of Web-Based Cotton Production Cost Calculator	18	
	Economic Performance of Irrigation Technology on Cotton in the Southern High Plains	19	
	Estimating Brazilian Cotton Supply Response: A Linear Supply System Approach	20	
	Evaluating Yield and Revenue Insurance as a Risk Management Tool for Cotton Producers in the Southern Texas High Plains	21	
	Evaluation of Bacillus Thuringiensis Technology in Texas Corn Production	22	
	Further Development of the Cotton Wizard Cotton Variety Selection Program	23	
	Interactions Among Climate, Humans, and Playa Wetlands on the Southern High Plains	24	

Marginal Value of Agricultural Groundwater Use in the Texas High Plains: A Private Versus Social Perspective	25
Natural Resource Management and Sustainability Issues in the Texas High Plains	26
Ogallala Aquifer Initiative – Economic and Policy Implications of Underground Water Use in the Southern Ogallala	27
Performance-Based Premium Rate Discount Project	28
Potential Economic Benefits of Adjusting Dryland Cropping Strategies Based on Seasonal Rainfall Forecasts	29
Precision Farming – Site Specific Production Systems: Economics of Precision Farming Practices in the Texas High Plains	30
Preferred Producer Discount Pilot Risk Management Program Development	31
Probability Distribution Function Models for Risk Analysis and Their Application to Crop Insurance Premium-Rate Setting	32
Profitability Analysis of Cotton Production for Major Cotton Producing Regions of Texas	33
Providing Risk Management Tools for Producers Who Diversify Into New or Specialty Crops	34
Quality Assessment of Major Textile Markets for Texas Cotton	35
Reference Yield Update Methodology Project	36
Spacial Analysis of Precision Agriculture Data: An Approach to Improve Management Zone Delineation Procedures for Texas Cotton	37
Structural Models of the U.S. and the Rest-of-the-World Natural Fiber Market	38
Towards and Integrated Water Policy Planning Model for the Texas High Plains	39
Treatment Technologies for Phosphorus Removal	40
U.S. Textile Manufacturer's Pricing of Cotton Quality	41
USDA Unit Division Structure Review	42
Water Conservation Policy Alternatives for the Southern Portion of the Ogallala Aquifer	43

	Water Conflict Resolution in the Lower Rio Grande Valley: A Game Theoretic Approach	44
Appendix B:	Research Funding.	45
Appendix C:	Publications	49
Appendix D:	Presentations That Were Not Published in Any Outlet	59
Appendix E:	Notes on Cotton Economics Research Advisory Committee Meeting	63
Appendix F:	Advisory Committee Members	69
Appendix G:	CERI Research/Extension Symposium.	75
Appendix H:	CERI Commodity Outlook Conference	79
Appendix I:	Cotton Economics Research Update	83
Appendix J:	Cotton Economics Research Fact Sheets	93
Appendix K:	Thornton Institute Activities	99

General Summary

The department began producing formal reports of research activities in 1995/96 in conjunction with the establishment of the Cotton Economics Research Program; reports on Cotton Economics Research have been done annually since then. As our research programs expanded and diversified, we initiated a separate Departmental Research Report in 1998/99. With this annual report we are combining all research reporting into the single report, with more compartmentalization of research programs.

This report highlights research activities in the Department of Agricultural and Applied Economics during fiscal year 2003/04. The overall program has been characterized by its flexibility in addressing varied issues of economic significance and is applied in nature, although there are some other disciplinary elements within it. We are allocating approximately 46% of its full-time faculty resources to research (about 6 FTE on a 12 -month basis), including our 48% research appointment with the Texas Agricultural Experiment Station. Research projects in the department cover a range of subject matter areas: production economics (including finance and risk management), market economics, natural resource (including environmental) economics, international economics, economic policy analysis, and consumer economics.

Fiscal year 2003/04 was another productive research year for the Department of Agricultural and Applied Economics. Overall, 32 different research projects were active during the year. Appendix A contains the individual annual reports of each active research project. While we are increasing our level of research activity in cotton economics, an increasing proportion of the research is in other subject-matter areas. The research program is becoming more diverse as per our strategic plan. Also, the program continues to become relatively more nationally and internationally focused, as opposed to state focused. These changes are occurring in part because of our relatively greater federal funding compared to state funding.

Total funding secured by faculty in the Department for the research projects during fiscal year 2003/04 was \$1,608,000 (Table 1). More details on research funding in 2003/04 are provided in Appendix B. The specifics with respect to the funding generated under the different projects is outlined in the individual projects' annual reports. Of the \$1.6 million generated, 16% came from State funding sources, 78% came from Federal funding sources, and 6% came from Private funding sources. It is important to point out that of the \$256,145 coming from State funding sources, approximately 62% (\$159,453) came to the Department under the Applied Economics Research Fund (a combination of the former Cotton Economics Research special item and a portion of the former CASNR Plant Stress funding). From the total internal funding base, the faculty generated \$6.58 of external funding for each \$1.00 of departmental funding. The total amount of research funding generated by the faculty in fiscal year 2003/04 was the highest level in the history of the Department (Table 1). In the last five years, total research funding increased by 156%; the largest increase has been in federal funding (896% increase).

Table 1. Department of Agricultural and Applied Economics Research Funding by Source, 1981/82 to 2003/04.

		Source		
Year	State	Federal	Private	TOTAL*
		Dollars		
1981/82	148,983	2,000	27,180	178,163
1982/83	127,105	19,424	19,650	166,179
1983/84	167,660	70,413	29,687	267,760
1984/85	164,292	174,065	68,837	407,194
1985/86	165,413	80,067	33,381	278,911
1986/87	173,392	138,077	54,400	365,869
1987/88	123,265	155,202	22,700	301,167
1988/89	102,134	78,533	0	180,667
1989/90	99,531	57,700	3,000	160,231
1990/91	72,221	25,000	12,525	109,746
1991/92	109,437	40,000	123,475	272,912
1992/93	171,429	75,379	121,825	368,633
1993/94	115,776	130,699	106,250	352,725
1994/95	197,947	60,054	109,686	367,687
1995/96	251,932	145,576	64,500	462,008
1996/97	236,607	104,377	67,400	408,384
1997/98	287,576	116,750	121,232	525,558
1998/99	302,788	116,239	227,016	646,043
1999/00	371,803	126,400	130,705	628,908
2000/01	322,057	203,386	109,734	635,177
2001/02	349,003	457,508	95,508	902,407
2002/03	547,904	787,186	89,321	1,342,474
2003/04	256,145	1,258,791	93,072	1,608,008

^{*}The total reflects funding of the specific research projects (e.g., in Appendix A), funding associated with cooperative research projects, and other Departmental research activities.

Research funding represents one aspect of the Departmental research program; i.e. one of the inputs. Another aspect --the output side-- is composed of the awarding of graduate degrees, the education of students, and the dissemination of research results. Thus, the teaching and research missions of the Department are highly complementary in nature, and research activity has proven to be valuable to our students when they finish their programs.

For the five fiscal years from 2000 to 2004, an average of 5.2 graduate degrees were awarded per year; an average of 0.6 Master of Agriculture degrees, 3.6 Master of Science degrees, and 1.0 Ph.D. degrees per year, respectively (Table 2). The department financially supported 21 graduate students from research funds in 2003/04, providing learning opportunities for students working on research projects. In addition to graduate student training and degrees, nine undergraduate students were supported from research project funds in 2003/04.

Another component of the output side of the research program is the number and quality of publications and presentations. Table 3 presents a summary of the Departmental publications and presentations for the 1979/80 to 2003/04 fiscal years. Appendices C and D contain a complete listing of the 2003/04 publications and presentations, respectively.

The Cotton Economics Research program began using an advisory committee in 1996, and advice and perspective from that committee has been of great value in guiding the development of the program. Working with that committee in 2003/04 (Appendix E), the department made the decision to expand the committee membership and use it as an overall AAEC Department Research Advisory Committee. The "new" committee will be implemented in 2004/05. Membership of the Cotton Economics Advisory Committees and the Department Research Advisory Committee are shown in Appendix F.

The remainder of the report provides an overview of research activities and accomplishments of several identifiable major components or thrusts of the overall research program. These thrusts are (a) the Cotton Economics Research Institute, (b) the Thornton Agricultural Finance Institute, (c) the Risk Management/Crop Insurance initiative, (d) the Center for North American Studies – Texas Tech Component, and (e) the Water Resource Economics initiative.

Cotton Economics Research Institute

The Cotton Economics Research Institute (CERI) coordinates and fosters economic research activities on all aspects of cotton within Texas Tech and with other research entities. The primary focus is on economic matters, but we coordinate and cooperate with other research efforts, both economic and non-economic in their primary intent. The institute focuses both on conducting research and the dissemination of research results to users. Within the CERI, the research activities cover most aspects of economic matters pertaining to cotton and textiles – production and management; processing, manufacturing, and transportation; pricing and marketing; and trade and policy analysis. The policy analysis component of the program which has grown substantially, is covered in a separate sub-section.

Table 2. Graduate Degrees Awarded, Department of Agricultural and Applied Economics, 1982/83 to 2003/04

Year	Master of Agriculture	Master of Science	Ph.D.
1982/83	1	5	1
1983/84	0	3	0
1984/85	1	3	1
1985/86	3	10	0
1986/87	0	8	0
1987/88	1	6	3
1988/89	1	5	4
1989/90	0	5	0
1990/91	0	5	0
1991/92	1	5	4
1992/93	2	4	1
1993/94	4	5	3
1994/95	1	3	2
1995/96	2	5	2
1996/97	3	5	2
1997/98	0	4	0
1998/99	0	4	2
1999/00	1	3	0
2000/01	0	3	1
2001/02	1	4	0
2002/03	1	3	2
2003/04	0	5	2

Table 3. Department of Agricultural and Applied Economics Publications And Presentations, 1979/80 to 2003/04.

Year	Journal Articles	Books & Chapters	Technical Res. Repts.	Proceeding Papers	Abstracts	Other Presentations
1979/80	1	0	5	1	2	3
1980/81	3	2	9	4	2	5
1981/82	4	5	10	2	1	4
1982/83	5	6	9	4	3	3
1983/84	5	1	10	6	5	2
1984/85	4	1	19	3	13	6
1985/86	11	4	16	5	13	8
1986/87	6	1	16	8	8	7
1987/88	12	3	9	8	9	10
1988/89	11	3	3	5	5	9
1989/90	9	0	3	4	9	12
1990/91	14	2	4	5	10	19
1991/92	7	1	6	12	11	17
1992/93	9	3	1	9	14	10
1993/94	5	2	15	17	9	7
1994/95	7	1	16	16	19	21
1995/96	10	1	3	28	8	12
1996/97	9	0	14	17	9	22
1997/98	9	0	11	12	4	23
1998/99	18	1	14	11	2	16
1999/00	14	3	16	13	3	12
2000/01	15	3	18	21	1	24
2001/02	16	0	19	18	26	8
2002/03	23	7	14	12	8	4
<u>2003/04</u>	19	1	13	23	11	<u>13</u>

Summary of CERI Activities

Fifteen cotton economics research projects were funded in part using departmental resources during the last year. Each of the department's projects listed in Appendix A that is associated with the cotton economics program is identified with a "C" notation in the upper right portion of the page. Examination of the evolution of the research program shows that it is becoming more nationally and internationally focused, and has more policy focus, driven in part by expanded funding from federal sources.

Other measures of productivity include publications and service to the cotton industry. The publications list (Appendix C) identifies CERI-related items with a "c" superscript at the beginning of the citation. Overall, the faculty authored/co-authored 39 CERI-related publications during the past year, which included 5 professional journal articles, 22 proceedings papers at industry and professional meetings, 5 technical research reports, and 7 published abstracts from professional meetings. Faculty members in the department also engaged in a broad range of service activities for industry (domestic and international), government, and professional organizations that are directly related to cotton. Included were the fourth annual Research/Extension Symposium in March, 2004 (meeting agenda in Appendix G) and the second Commodity Outlook Conference in May, 2004 (meeting agenda in Appendix H). Two newsletters (Appendix I) were distributed and posted on the web site. Also, 4 Fact Sheets (Appendix J) on research findings were mailed and posted. Principal Investigators also answer many questions and requests for information to the industry and general public on a regular basis, although no formal record fo all these activities is maintained.

Cotton Policy Research Activities

The central purpose of this work is policy-related research on U.S. and global cotton and textiles; it focuses on U.S. and global analysis because from an economic perspective they are inseparable and it focuses on both cotton fiber and textiles because analysis of either without the other is incomplete. The core funding for this research is through a Texas Tech Federal Initiative, "Optimizing Production Systems, Market and Policy Analysis for Cotton and Other Natural Fibers."

¹A historical note on the development of the Natural Fiber Policy Analysis Initiative: The AAEC department began discussing a plan for Texas Tech to assume a role in analyzing cotton policies and make U.S. and global projections for cotton with the Food and Agriculture Policy Research Institute (FAPRI) at the University of Missouri in 1996. Given our history and reputation in cotton research, FAPRI was receptive. We approached Texas A&M University (TAMU), proposing a joint federal initiative on this policy research. Texas Tech President David Schmidly made the decision to add this component to the existing federal initiative which funded the International Cotton research Center (which had been funded for FY 1998, 1999, and 2000 at \$200,000/year) instead of adding a new initiative. The result was that the combined initiative was funded in FY2001 of \$500,000/year (funding was actually received from USDA in 2002), with the TTU portion for policy research funded at \$156,000. The TTU policy funding has increased to \$301,000 in FY 2004. Funding is divided 50% to the ICRC portion and 50% to the policy analysis portion, with 54.56% of the policy analysis portion to TTU and 45.44% to TAMU.

The analytical platform for most of the policy analysis is a global fibers model, which has been the object of much of the work in the program to date. This evolving economic model is used to simulate an array of policy scenarios, thus providing reliable information on expected impacts of policy alternatives to policy making groups – Congress, USDA, and the cotton and textile industries. This model is, we believe, the best of its kind because it (1) is global in its structure, rather than assume that the U.S. economy functions in isolation, (2) integrates not only cotton with the textiles sector, but also with the man-made fiber sector, and (3) is quite detailed in the supply aspects of cotton in several of the major supplying countries. It also links with the other agricultural commodity sectors through the other FAPRI models.

During FY 2003/04, the policy analysis research contingent made substantial progress in output, productivity, and recognition. The program, led by Dr. Samarendu Mohanty, got the global model functioning and developed the global fiber baseline projections for FAPRI. Other significant accomplishments included (1) presenting results to House and Senate staffs, USDA analysts and commodity groups, (2) hosting the Commodity/Outlook conference in April, and (3) conducting a study of the impacts of the Brazilian WTO proposal on dismantling the U.S. cotton program.

Thornton Agricultural Finance Institute

The mission of the Thornton Agricultural Finance Institute is to focus faculty research on important topics in agricultural finance, provide support for courses and research in agricultural finance and related areas, and facilitate public service functions related to agricultural finance and banking. Dr. Phillip Johnson is the current Director of the Institute.

In FY 2003/04, the institute conducted activities in both the research and service areas. The following sub-sections summarize the activities in those areas.

Research

There were two research projects associated with the institute in 2003/04; these are identified by an "F" symbol in the upper right corner of the project reports in Appendix A. Funding for the projects were partially from Institute resources and partially from external research grants. There were also two publications and presentations on financial matters, being identified with an "f" superscript on the publications and presentations lists in Appendices C and D. There were 4 students employed with Thornton Institute funds during the year.

Service

The Institute co-sponsored the 31st Annual Bankers Agricultural Credit Conference in November, 2003, which addressed issues and topics related to agricultural lending, the agricultural economy, legal and regulatory issues, commodity outlook and other issues of interest to rural bankers and lenders (Appendix K). The conference is directed by a board of directors made up of representatives from area banks as shown in Appendix K.

The 2003 Texas Agricultural Lending School was held in October, 2003. The Lending School provides an in-depth curriculum on issues relating to agricultural lending and is co-

sponsored by the Institute and Texas A&M University (Appendix K). An Advisory and Planning Committee made up of representatives from banks and agricultural lending institutions in Texas direct the program (see Appendix K).

Risk Management/Crop Insurance Initiative

The risk management/crop insurance initiative at Texas Tech was initiated in 2002/03 with the Excellence Fund that was made available by the Texas State Legislature to promote excellence in specific research areas. Two new faculty positions were created and Dr. Thomas O. Knight (Professor) and Dr. Roderick M. Rejesus (Assistant Professor) joined the faculty to lead that effort.

The majority of the activities in this program have been focused on issues related to the premium-rate setting and the compliance issues of crop insurance. However, research on general risk management issues in agriculture is also being addressed as needed. A summary of the activities and accomplishments of this initiative during FY 2003/04 are reported below.

Summary of Activities

In 2003/04 there were nine risk management related active research projects, each noted with a "R" symbol in the upper right corner of the project summary in Appendix A. Much of the focus of the program has been on approaches to various aspects of insurance that make the system more effective or efficient, e.g., effective rate structures, underlying loss probability distributions for a range of insured or potentially insurable products, etc. Excellence Fund support was taken from the University with the 2003/04 year, so the program has been totally self-sustained by faculty in the department during the year, thus impeding growth of that initiative. Even so, the program showed an external funding level for risk management research during the fiscal year of \$649,000. Aside from funded research, the risk management and crop insurance initiative has also been involved in producing publications and research reports; during FY 2003/04, faculty involved in this initiative authored/co-authored seven peer-reviewed publications and presentations and three other research reports. Research publications associated with the risk management initiative are noted with an "r" superscript in Appendix B.

Service activities and education/training of students are also an important part of the risk management and crop insurance initiative. Testimony was given before the House Agriculture Sub-Committee on General Farm Commodities and Risk Management during the past fiscal year and technical assistance on crop insurance matters was provided to elected officials, government agencies, and industry. The program also provided financial support and training for two students (1 Ph.D. and 1 M.S.) and one Post-Doctoral Research Associate during 2003/04.

Center for North American Studies; Texas Tech Component

While the department began "internationalizing" its educational programs 20 years ago, the opportunity to emphasize international issues in research and outreach has emerged in the

form of our participation in the Center for North American Studies (CNAS)². The objectives of the CNAS program are to facilitate trade within NAFTA by conducting applied research and educational outreach on trade issues between the U.S., Mexico, and Canada. The TTU responsibilities concentrate on cotton and textiles, grains, and livestock and products trade, primarily with Mexico. There is an obvious synergy between CNAS activities, the main element of our international initiative, and the Cotton Economics Research Institute, especially the policy analysis thrust within that.

During 2003/04, the program has made a start, even with minimal funding, with leadership from Dr. Jaime Malaga. In the research activities, a study of cotton and textile trade between the U.S. and Mexico was completed and several publications have resulted; publications which are focused on international markets are noted with an "i" superscript in Appendix C. Research projects with an international focus are identified with an "I" notation in the upper right corner of the project reports in Appendix A.

In addition to the research component of CNAS, a collaboration between Texas Tech and Chapingo University, Mexico, was initiated. A memorandum of understanding was signed in February, 2004 by the President of the University of Chapingo and the Provost of Texas Tech University. This memorandum facilitates the cooperation between both institutions with respect to academic programs and research activities. In May, 2004, Dr. Samarendu Mohanty taught a 40 hour graduate level course on Agricultural Policy to 25 doctoral students at the University of Chapingo and met with agricultural policy makers of the Mexican Government. In August, 2004 the first Mexican researcher arrived at TTU to spend a semester involved in analysis of Mexican agricultural policies and their impact on bilateral trade.

Water Resource Economics Initiative

Departmental faculty have been active in water economics research for the past four decades (see Johnson and Schwartz in Appendix C for a compilation of published results from these studies). Most of the research during that time focused on issues of relevance to the Southern High Plains of Texas and many conducted in conjunction with the Texas Agricultural Experiment Station at Lubbock. In fact, underground water utilization related research was the main reason for the establishment of this long-standing relationship. It has also served as a support base for water economics research in the absence of the department having core funding to support those activities. Further, the research has mostly emphasized water use efficiency analysis for water in agricultural uses and regional economic impacts of underground water availability.

² A historical note on the development of the CNAS: CNAS originated in 1994 as a collaboration between Texas A&M Univ. (TAMU) and Louisiana State Univ. (LSU); it was funded at \$87,000/year FY 1994-FY 2001. In 2000, Texas Tech Univ. (TTU) and New Mexico State Univ. (NMSU) were invited to join in the collaboration; federal funding for FY 2002 was increased to \$200,000/year, with the TTU share being \$21,189. FY 2004 funding has increased to \$837,429, with TTU funding at \$151,478.

In our ongoing water research activities, the department is broadening its research focus on water to include more policy-related research. Much past research has focused heavily on water use efficiency, its economic feasibility, adoption, and consequences. With utilization efficiency in agricultural uses (accounting for about 95% of water use) now being very high, extending the life of the aquifer will depend more heavily on policy actions and solutions. Analytical capability for determining economic consequences at both macro and micro levels will become essential for good public policy decisions, and the department has set improving this analytical capability as a research priority.

Summary of 2003/04 Activities

During 2003/04 faculty in the department participated in the Federal Ogallala Initiative, a collaborative project among Texas Tech, Texas A&M, and Kansas State Universities. There were three active projects during the year, each having policy applications. Projects in Appendix A that were water economics related are identified by a "W" in the upper right corner of the page. Two studies were in process in 2003/04 that expand our base for water policy research; one, completed this year, utilized a regional non-linear dynamic optimization model to analyze economic impacts of several water conservation policy alternatives, such as pumpage restrictions and taxes. The other, still in progress, builds on that research, integrates the economic model with a hydrologic model, and should provide enhanced analytical capability for projecting and analyzing impacts of both policies and technologies on the economy, economic sectors, and the underground water resource.

Departmental faculty published or presented 14 papers on water topics in 2003/04; these are denoted with a "w" superscript on the citations in Appendices C and D. Four graduate students worked on water economics topics under the direction of different faculty members. A dedicated funding base is needed for this important and highly relevant initiative to reach its potential.

Appendix A

ANNUAL PROGRESS REPORTS

2003/04

Project TitleBusiness Models for Competitive Success in the Texas Textile

Industry

Principal Investigators Conrad Lyford and Jaime Malaga

Primary Funding

Agency

USDA/ICRC

Funding Amount

Project Objective

\$ 70,176 09/01/02 08/31/04

Beginning Date Ending Date

Identify business models that can be successful in the

Texas textile industry Specific objective(s):

1. Determine the business models that currently exist and key reasons for their success;

2. Evaluate the forces of change in the textile industry and the stability of the business models defined in (1) above.

3. Determine the cost structure of textile production in Texas relative to competition.

Project Summary

and

Keywords

Accomplishments

Having a strong and viable Texas textile industry is important to the Texas cotton industry because local textile production increases demand and returns. Firms in the U.S. textile industry have been under substantial competitive pressure due to the strong U.S. dollar and other factors, including international competitors' goals to capture market share. This has caused many U.S. (including some Texas) textile facilities to close.

This research identifies business models that can be successfully competitive currently and in the future for the Texas textile industry. As business models are identified, the primary benefit be to show economic/business opportunities for the Texas textile industry that offer strong prospects. In addition, this information can be used to promote effective industry practice in key areas as well as indicate the future of the industry.

•

Business Models, Textiles, Texas

Contact Investigator Conrad Lyford

Project Title Center for North American Studies (CNAS)-Texas Tech Component

Principal Investigators

Jaime E. Malaga

Collaborators and Collaborating Agencies

Texas A&M Univ., Louisiana State Univ., New Mexico State Univ.

Primary Funding

Agency

USDA-CSREES

Funding Amount \$ 21,189 7/03-6/04;\$151,478 7/04-6/05; (\$42,904 FY 2003/04)

Beginning Date 06/01/02 **Ending Date** 07/14/05

Project Objective Analyze (1) issues affecting the competitiveness of Texas exports to

the North American markets and (2) impacts of the growing

integration of US and Mexican agricultural industries on the regional economy, with emphasis in the cotton-textile and feed grain sectors.

Project Summary and Accomplishments

The Texas Tech research component started in June 2002 with the gathering of basic data on the Mexican cotton/textile/apparel sector; 96-98% of Mexican apparel exports are directed to the US market. In part due to NAFTA, Mexican share of the US apparel market expanded during the 1990's and Mexico became the largest importer of US cotton.

An econometric model of the Mexican Cotton Industry has been estimated (Supply, Derived Demand, and Trade) and a simulation model built to assess the impact on the US-Mexico cotton trade of alternative policy scenarios in both countries. A data base of Mexican grain sorghum production, consumption, and marketing has been built. Preliminary results show the Mexican corn/sorghum price ratio and the poultry industry expansion as the key variables for US sorghum exports to that country. Also, a memorandum of understanding has been signed between Texas Tech University and the University of Chapingo in Mexico. This agreement facilitates the exchange of faculty and students involved in agricultural policy/trade research.

Keywords Agricultural Trade, NAFTA

Contact Investigator Jaime E. Malaga

Project Title Daily Price Analysis and Reporting for the Texas Oklahoma Cotton

Market

Principal Investigators Sukant Misra and Don Ethridge

Collaborators and

Collaborating Agencies

Plains Cotton Cooperative Assn.

Primary Funding

Agency

Texas State Support Committee

Secondary Funding

Agency

Cotton Incorporated

Funding Amount \$ 64,000 (\$32,000 for FY03/04)

Beginning Date 1/1/2003 **Ending Date** 12/31/2004

Project Objective To Develop, validate, and operate an objective system for estimating

cotton prices and quality attribute premiums and discounts in the Texas Oklahoma markets and disseminate that information to market

participants.

Project Summary

and

Accomplishments

The analysis of the 2003/04 marketing year suggests that prices increased and were at their highest level in the last four years averaging 63.68 cents a pound. Total bales and total sales for the

West Texas region declined compared to last year. Although total sales for the East Texas/Oklahoma region remained unchanged, total bales for the region increased to 90,620 bales about 15 percent higher than its 2002/03 level. The higher prices were likely influenced by an increased level of overall quality in addition to supply and demand factors. For the 2003/04 marketing year, the results indicated lower premiums for low leaf grade and uniformity and higher premiums for

However, premium levels for better than base quality strength and the first digit color grade appear to be minimal. Price discounts in 2003/04 for staple length, first and second digit of the color grade, strength, and uniformity either remained unchanged or decreased, while discounts for leaf, micronaire, and bark increased compared to

higher staple length, color grade, and higher level of strength.

2002/03 levels.

Keywords Cotton, Prices

Contact Investigator Sukant Misra

Project Title Demand for U.S. Made Cotton Apparel and its Implications for the

Cotton Industry

Principal Investigators Sukant Misra

Primary Funding

Agency

USDA/CSREES (through the International Cotton Research Center,

Texas Tech University)

Funding Amount \$ 35,000

Beginning Date 9/1/2003 **Ending Date** 8/31/2004

Project Objective The central objective of this research is to understand consumer

demand for U.S. made cotton apparel (cotton and denim) and to analyze their demand growth potential relating to consumer

socioeconomic profiles and geographical regions.

Project Summary

and Accomplishments

The results of the study indicate that garments' own prices, age, female employment, gender, regions, and presence of children

significantly influence purchase decisions.

Male shirts, male shorts, female jeans, female slacks, skirts, female shorts, and dresses were found to be necessary goods, while male jeans and male slacks were luxury goods. Demands for male shirts and male jeans were price-inelastic and demands for male shorts, male slacks, female slacks, skirts, female shorts, and dresses were price-elastic. Estimated inelastic cross-price elasticities suggest that pricing strategies such as price promotion to increase sale of one garment type should be limited to the targeted products.

Higher expenditure shares were generally associated with higher level of cotton blend. The extent to which expenditure share increased due to higher cotton blends depended on the garment itself. The results further suggested that marketing strategies focused solely on product origins might not increase market share for domestically produced apparel.

Keywords Cotton, Consumer Demand, Apparel

Contact Investigator Sukant Misra

Project Title Developing Financial Derivatives to Mitigate Marketing Risks Under

Grid Pricing for Fed Cattle Producers

Principal K.H. Coble (Mississippi State), J. Anderson (Mississippi State), T.O.

Investigators Knight (Texas Tech), R.M. Rejesus (Texas Tech)

Collaborators and Collaborating Agencies

Collaborators and Mississippi State University

Primary Funding

Agency

USDA-RMA

Funding Amount \$159,500 (TTU component), Total: \$452,363

Beginning Date 09/1/04 **Ending Date** 08/31/07

Project Objective To develop risk management tools that will assist livestock producers

in improving techniques for managing price, revenue, or production and market risk and reducing the impact of multiple year losses.

Project Summary

and

Accomplishments

Grid pricing, rather than on live animal characteristics based on carcass characteristics of each animal, is rapidly overtaking traditional approaches to the marketing of fed cattle in the United

traditional approaches to the marketing of fed cattle in the United States. This approach offers higher prices for cattle of a known quality and clearer signals of market value, but poses new risks to the cattle producer as grid prices diverge from the existing live cattle futures contract and there are uncertainties associated with the base price used in the pricing grid and the Choice/Select spread. This project develops financial derivatives that will improve the marketing risk management alternatives available to cattle feeders marketing cattle on a carcass weight or grid pricing basis. The project surveys and summarizes grid pricing options currently available to producers of fed cattle, evaluates the hedging performance of the existing live cattle futures contract as a tool for managing price risk in grid pricing systems, and proposes and evaluates new derivatives that can be used to manage risks relevant to pricing grids such as base price and discount variability. This research will have broad implications, and

all fed cattle producers in the United States may benefit.

Keywords Livestock Risk, Grid Pricing, Derivatives

Contact Investigator Thomas O. Knight

Project Title Development of Web-Based Cotton Production Cost Calculator

Principal Investigators

Phillip Johnson and Sukant Misra

Primary Funding Agency

Cotton Incorporated (\$12,817 01/01/02 - 12/31/02)

Secondary Funding

Agency

Thornton Agricultural Finance Institute (\$12,890 09/01/03 - 08/31/04) and Applied Economics Research (\$2,643 09/01/03 -

08/31/04)

Funding Amount Total \$28,350

Beginning Date 01/01/02 **Ending Date** 09/31/04

Project Objective Develop a web-based standardized performance analysis system to

evaluate enterprise profitability and cost of production for cotton that

can be used to evaluate a past crop year or as a planning tool.

Project Summary

and

Accomplishments

Knowledge of the true costs of production is required for cotton producers to make sound production, financial, and marketing

decisions. An information-based management tool that can be used in conjunction with their record systems would assist producers in calculating their true production costs. An enterprise production cost calculator will aid producers in evaluating enterprise cost and returns by using income statement financial information in addition to

enterprise production information. The allocation of income and cost items from the income statement to enterprises and sub-enterprises through the use of specified allocation methods facilitates the calculation of a true cost of production and enterprise profitability.

A web-based production cost calculator was developed and is on line

at: http://www.aeco.ttu.edu/CER-Institute/Resourcepage.htm

Keywords Standardized Performance Analysis

Contact Investigator Phillip Johnson

Project Title Economic Performance of Irrigation Technology on Cotton in the

Southern High Plains

Principal Investigators Vernon Lansford and Eduardo Segarra

Collaborators and Collaborating Agencies J. Bordovsky. Texas Agricultural Experiment Station - Lubbock,

Texas A&M University

Primary Funding

Agency

None

Beginning Date 04/01/2003 **Ending Date** 08/31/05

Project Objective Provide an economic assessment of irrigation technologies under

various production scenarios such as depth to ground water, water availability, the price of cotton and type of irrigation equipment used.

Project Summary and

Accomplishments

The area of Subsurface drip irrigation (SDI) in the Texas Southern High Plains has been expanding at an increasing rate each year and the trend will likely continue. Field experiments were conducted from 1999 through 2001 to improve water management of irrigation systems in the Southern High Plains of Texas. From these data, production functions were developed with lint yield a function of water availability (soil moisture, seasonal rainfall, and irrigation) and type of delivery system. Enterprise budgets were developed from the

estimated production functions. Projected per irrigated acre net returns for SDI and LEPA were comparable at \$123 versus \$126, respectively. It was estimated that SDI increased lint yields by 47 pounds per acre over LEPA for the given irrigation, seasonal rainfall, and soil moisture availability conditions. SDI also increased cotton fiber quality, receiving a \$0.02 per pound price premium over LEPA.

However, the economics of SDI is field dependent and each application of SDI should be evaluated separately when evaluating

the economics of SDI versus LEPA.

Plans are to update the economic analysis in 2005 with additional

research data.

Keywords LEPA, Drip Irrigation, Economic Profitability, Cotton, Southern

High Plains

Contact Investigator Vernon Lansford

Project Title Estimating Brazilian Cotton Supply Response: A Linear Supply

System Approach

Principal Investigators David B. Willis

Primary Funding

Agency

unfunded

Beginning Date 09/01/02 **Ending Date** 05/15/04

Project Objective To estimate the cotton supply response for Brazil's two major cotton

production areas.

Project Summary

and

Accomplishments

A linear supply system acreage allocation model was estimated for Brazil's four dominant field crops (cotton, soybeans, corn and rice) in Brazil's new and expanding cotton producing states of Mato Grosso and Goiás, and the traditional South-Southeast and North-Northeast

cotton producing regions. Cotton acreage response to additional field cropland (scale effect) and own and cross crop gross return elasticities were estimated. Results indicate cotton is the least responsive crop to increases in cropland, and that cotton acreage is

significantly affected by own and cross corn and rice gross returns behavior in the expanding region. A surge in Brazil's cotton production is expected in the medium-long term, but not in the

immediate future.

Keywords Acreage Allotment Model, Linear Supply System, Brazil, Cotton

Production, Scale Elasticities, Supply Elasticities

Contact Investigator David Willis

Project Title Evaluating Yield and Revenue Insurance as a Risk Management

Tool for Cotton Producers in the Southern Texas High Plains

Principal Investigators Phillip Johnson

Primary Funding TTU, Thornton Agricultural Finance Institute (\$9,290 09/01/03 -

Agency 08/31/04)

Secondary Funding TTU, Applied Economics Research (\$2,643 09/01/03 - 08/31/04)

Agency

Funding Amount Total \$11,933

 Beginning Date
 09/01/03

 Ending Date
 08/31/04

Project Objective Develop and illustrate the application of an empirical procedure to

evaluate and compare economic implications of various existing and new cotton insurance products as risk management tools.

Project Summary and Accomplishments

Cotton producers in the Southern Texas High Plains (STHP) have high production risk from weather and biological factors. Many producers also rely on borrowed capital to finance farming operations. The interaction of production (business) risk and financial risk increases the overall risk environment of producers in the region. Crop insurance is an important risk management tool to lower their risk exposure from adverse production factors. Several alternative crop insurance products are available and farmers need information to determine which crop insurance option will best manage their business and financial risk. Location, financial situations, risk aversion, and current governmental policies all factor into the best option available to producers.

This study evaluates various crop insurance options available to STHP cotton producers using simulation techniques that take into account the distribution of yields, prices, and production costs. The Standardized Performance Analysis (SPA) database will be used construct model farms that will be used in the simulations.

Keywords Crop Insurance, Risk Management

Contact Investigator Phillip Johnson

Project Title Evaluation of Bacillus Thuringiensis Technology in Texas Corn

Production

Principal Investigators Phillip Johnson, Jay Youngblood

Primary Funding

Agency

Texas Corn Producers Board (\$1,200 1/00 - 12/00)

Secondary Funding

Agency

TTU, Applied Economics Research

Funding Amount None for 2003/04

Beginning Date 09/01/99 **Ending Date** 12/31/03

Project Objective Evaluate the impacts on costs of production, yields, and profitability

of the use of Bt corn varieties in Texas.

Project Summary

and

The use of transgenic crop varieties in the Texas High Plains is becoming an important production practice for many farmers.

Accomplishments Transgenic crop varieties have the potential of reducing production

input costs and the use of chemicals in the crop production system. A survey of Texas corn producers was conducted to gather information on the costs and benefits of Bt corn. Findings indicated that those that

have adopted the Bt varieties were willing to pay an additional \$19.11/acre to reduce yield fluctuations due to insect pressure while non-adopters would only be willing to pay an additional \$11.37/acre.

This compares to a difference in seed cost between the Bt and

conventional varieties of \$14.67/acre.

Keywords Bacillus Thuringiensis, Corn, Corn Borers

Contact Investigator Phillip Johnson

Project Title Further Development of the Cotton Wizard Cotton Variety Selection

Program

Principal Investigators **Emmett Elam**

Primary Funding

Agency

Cotton Incorporated

Funding Amount \$40,000 Beginning Date 01/01/04 Ending Date 12/31/04

Project Objective The overall objective is to provide cotton breeders with a common

set of tools and procedures for evaluating breeding lines and varieties. Specific objectives are to: 1) develop a data template for collecting varietal performance data and a system that allows access to the collected data, 2) provide an assessment mechanism that breeders can use with the performance data collected in objective 1, and 3) provide instruction on how to use the data template, data, and

assessment tool(s) in evaluating cotton cultivars

Project Summary

and

Accomplishments

Cotton cultivar evaluation is based largely on fiber yield and fiber characteristics, with little consideration given to seed yield and characteristics. The Cotton Wizard cotton/cottonseed variety selection model, which provides comprehensive estimates of the economic value of the fiber and seed, was developed with CI support to aid decision makers. This research further develops the Cotton Wizard program to facilitate its use with user-developed data sets. This will facilitate cultivar evaluation.

A database system was developed for cotton performance test data so that users can 1) upload and review data to a central server with the use of the Internet and 2) query the master database, obtain data reports, and download data. A common numbering system has been developed to identify and track cotton varieties as they move through the testing process and a historical data set of West Texas cotton performance tests is being developed. The historical data set includes four years of individual varietal rep data. The user can average the rep data to obtain average-annual data.

Keywords Cotton Lint, Cottonseed, Variety Selection, Economic Returns

Contact Investigator Emmett Elam

Project Title Interactions Among Climate, Humans, and Playa Wetlands on the

Southern High Plains

Principal Investigators W.P. Dayawansa, Scott McMurry, Loren Smith, David Willis

Collaborators and Collaborating Agencies

The Institute of Environmental and Human Health, Texas Tech

University

Primary Funding

Agency

United States Environmental Protection Agency

Funding Amount

\$ 920,000 (Departmental share \$230,000)

Beginning Date 9/01/02 **Ending Date** 8/31/05

Project Objective To determine: (1) direct effects of climatic change on the ecology of

might have on human welfare and/or biodiversity.

the playa lake wetland system, agricultural land productivity and agricultural input requirements (fertilizer, seed, water, etc.) in the Southern High Plains and (2) how agricultural producers would modify land management practices to mitigate the effect of climatic change and how will these changes would impact the playa lake

ecosystems.

Project Summary and

Accomplishments

This research provides decision makers with an early warning system for anticipating the effect climatic change would have on the agricultural and ecological systems of the Southern High Plains. This knowledge will allow policy makers to develop cost-effective policies to minimize adverse consequences that climatic change

The Agricultural Policy/Environmental extender (APEX) simulation program developed by USDA's Blackland Research Center has been calibrated for the Texas High Plains and is being used to simulate chamical and sediment leadings into a representative playe vectorshed

chemical and sediment loadings into a representative playa watershed under alternative on-farm management practices. The simulated output is being used to identify best management practices (BMPs), or the policies that cost effectively reduce or eliminate sediment and chemical loadings into the playa lakes of the region. Predictions on expected changes in climatic patterns under global warming are being developed and will be used to simulate biological and

economic impacts.

Keywords Playa Lakes, Climatic Change, Wetlands

Contact Investigator David Willis

Project Title Marginal Value of Agricultural Groundwater use in the Texas High

Plains: A Private Versus Social Perspective

Principal Investigators David B. Willis

Primary Funding

Agency

unfunded

Beginning Date 01/01/04 **Ending Date** 08/15/05

Project Objective The broad objective of this research is to determine the marginal

value of underground water in the Texas High Plains when marketed

through irrigated crops.

Project Summary and

Accomplishments

This study will: (1) build a set of accounting budgets that depict the range of variable costs and coop production conditions in the Texas High Plains; (2) estimate crop yield responses to irrigation application rates (cotton, corn, sorghum, wheat, and peanuts); (3) evaluate the affects of government programs, (both subsidy and conservation programs) on producer returns to water; and (4) compare the value of water in agricultural use to alternative use values in order to determine if government programs are increasing

or decreasing social welfare from both an equity and efficiency

perspective.

County level data collected and provided by the United States Department of Agriculture as part of the annual Agricultural Resource Management Survey (ARMS) is being organized into a county level data base for the nineteen Texas counties that account for 96 percent of all Texas agricultural withdrawals from the Southern Ogallala Aquifer. Collected data consists of information on water use and irrigated acreage by crop. The ARMS data base is also being used to collect county level cost of production data. The collected data will subsequently be used in a dynamic economic optimization model.

Keywords Marginal Value Water, Agriculture, Texas High Plains

Contact Investigator David Willis

Project Title Natural Resource Management and Sustainability Issues in the Texas

High Plains

Principal Investigators Eduardo Segarra

Collaborators and

Collaborating

Agencies

Texas Agricultural Experiment Station - Lubbock

Primary Funding

Agency

United States Department of Agriculture - Southern Region

SARE/ACE Program

Secondary Funding

Agency

Texas Agricultural Experiment Station - Lubbock, Texas A&M

University

Funding Amount \$477,463 (share \$74,050)

Beginning Date 4/1/1997

Ending Date 5/31/2005

Project Objective To analyze and evaluate natural resource use and management issues

of relevance to Texas High Plains' agricultural producers.

Project Summary

Accomplishments

and

This project addresses many of the issues of relevance to the future sustainability of agriculture in the Texas High Plains. These issues

include groundwater utilization, technology adoption, optimal input

utilization, and crop/livestock production alternatives.

Keywords Optimal Natural Resource Use, Sustainable Agricultural Production

Practices

Contact Investigator Eduardo Segarra

Project Title Ogallala Aquifer Initiative - Economic and Policy Implications of

Underground Water Use in the Southern Ogallala

Principal Investigators Eduardo Segarra, Phillip N. Johnson, David Willis, and Jeff Johnson

Collaborators and Collaborating Agencies Steve Amosson, TAES - Amarillo; Jeffrey Peterson, KSU; and Lal

Almas, WTAMU

Primary Funding

Agency

ARS - USDA

Secondary Funding

Agency

CASNR, Texas Tech University

Funding Amount \$63,868 (\$60,000 ARS-USDA & \$3,868 CASNR-TTU)

 Beginning Date
 09/01/2003

 Ending Date
 08/31/2005

Project Objective To provide economic impact assessments of policies, water

conservation and production systems, and technological

developments affecting the use and availability of underground water

resources in the southern portion of the Ogallala Aquifer.

Project Summary

and

Accomplishments

Irrigated cropland accounts for 16.5% of the agricultural cropland acreage in the U.S., but accounts for approximately 38% of output. The Great Plains of the U.S. averages 15 to 20 inches of rainfall per year and depends on the underground water obtained from the Ogallala formation, one of the largest aquifers in the world. The Aquifer covers 173,000 square miles with saturated thickness from 0 to 1200 feet, averaging 200 feet, and aquifer capacity has been significantly reduced as a result of continued overdraft. This situation has implications not only for the many rural communities on the

Great Plains whose economic base depends on water resources from the Ogallala Aquifer, but for the future and continued assurance of the overall competitiveness of the American agricultural sector in the global economy. The current state of underground water utilization and availability in the Great Plains is a reflection of the combined result of current economic, social, and political factors. The sustainability of this resource and its associated economic

consequences need to be better understood.

Keywords Water Use, Water Conservation, Policy Analysis

Contact Investigator Eduardo Segarra

Project Title Performance-Based Premium Rate Discount Project

Principal Investigators Thomas O. Knight and Roderick Rejesus

Collaborators and Collaborating Agencies Mississippi State University

Primary Funding

Agency

Risk Management Agency- USDA

Funding Amount \$68, 978

Beginning Date 4/15/03

Ending Date 9/1/03

Project Objective Examine the potential for modifying the premium rate structure of

Federal Crop Insurance products to incorporate discounts based on prior loss experience of the insured or other indicators that the insured is low risk relative to other producers in the country.

Project Summary

and

Accomplishments

Statistical models were used to analyze Federal Crop Insurance databases to determine whether valid and statistically significant criteria can be used to develop appropriate performance-based

discounts. The effect of any proposed discounts on the performance

of the Federal Crop Insurance Program was also analyzed.

Keywords Crop Insurance **Contact Investigator** Thomas Knight

Project Title Potential Economic Benefits of Adjusting Dryland Cropping

Strategies Based on Seasonal Rainfall Forecasts

Principal Investigators Eduardo Segarra

Collaborators and Collaborating Agencies S. J. Maas, S. A. Mauget, and R. J. Lascano - Plant and Soil Science, Texas Tech University; Agricultural Research Service - Lubbock, USDA; and Texas Agricultural Experiment Station - Lubbock, Texas

A & M University

Primary Funding

Agency

College of Agricultural Sciences and Natural Resources, Texas Tech

University

Funding Amount \$33,000

Beginning Date 11/01/2000 **Ending Date** 12/31/2003

Project Objective To evaluate the profitability and implications of adjusting dryland

cropping production practices in the Texas High Plains based on

improved weather forecasts.

Project Summary

and

Accomplishments

Texas High Plains' producers face significant levels of uncertainty and risk associated with dryland agricultural production in a semi-

arid environment. This project seeks to evaluate dryland farm

management practices that could effectively reduce economic risks in

semi-arid environments.

Keywords Dryland Cropping Systems, Dryland Production Profitability,

Economic Risk Reduction

Contact Investigator Eduardo Segarra

Project Title Precision Farming - Site Specific Production Systems: Economics of

Precision Farming Practices in the Texas High Plains

Principal Investigators Eduardo Segarra

Collaborators and Collaborating Agencies R. J. Lascano, T. Archer, K. Bronson, M. Schubert, L. T. Wilson, S. Machado, H. Li, E. D. Bynum, and J. Bordovsky. Texas Agricultural

Experiment Station - Lubbock, Texas A&M University

Primary Funding

Agency

Texas A&M University Precision Agriculture Initiative

Funding Amount \$ 92,666

Beginning Date 09/01/2001 **Ending Date** 08/31/2004

Project Objective To evaluate the profitability and environmental implications of

precision farming practices (precise application of fertilizer and irrigation water, weather factors, and pests) in grain sorghum, corn,

peanuts, and cotton production in the Texas High Plains.

Project Summary

and

Accomplishments

Historically, agricultural crop production management practices treat

crop fields uniformly. Precision agriculture or site-specific

management recognizes within field spatial variability and seeks to optimize variable input use within the field. These practices have potential for improved input utilization efficiency, enhancement of

profits, and reduction of environmental impacts from crop

production.

Keywords Precision farming, Precision Agriculture, Technology Adoption,

Optimal Input Use

Contact Investigator Eduardo Segarra

Project Title Preferred Producer Discount Pilot Risk Management Program

Development

Principal Tom Knight (TTU), Barry Goodwin (Consultant), Keith Coble

Investigators (Mississippi State), Roderick Rejesus (TTU)

Mississippi State University

Collaborators and

Collaborating

Agencies

rating

Primary Funding

Agency

USDA-RMA

Funding Amount \$287,104 Beginning Date 5/3/2004 Ending Date 1/28/2005

Project Objective To develop an implementable premium rate discount structure for

several existing plans of insurance.

Project Summary

and

Statistical analysis of the data has commenced.

Accomplishments

Keywords Crop Insurance

Contact Investigator Thomas O. Knight

Project Title Probability Distribution Function Models for Risk Analysis and their

Application to Crop Insurance Premium-Rate Setting

Principal Octavio Ramirez (New Mexico State Univ), Roderick Rejesus

Investigators (TTU), and Tom Knight (TTU)

Departmental Involvement

Agricultural and Applied Economics

Collaborators and

Collaborating Agencies

Octavio Ramirez (New Mexico State Univ.)

Primary Funding

Agency

USDA-NRI

Funding Amount \$110,100 (TTU component)

Beginning Date 1/1/2004

Ending Date 12/31/2006

Project Objective To develop more flexible parametric pdf models for estimating

yield/price distributions and then to evaluate the relative impact of these flexible pdf models in crop insurance premium rate-setting.

Project Summary

and

Accomplishments

The Agricultural Risk Protection Act (ARPA) of 2000 provided the

mandate for further expansion of crop insurance coverage to "nontraditional" crops and other underserved agricultural

commodities. In crop insurance products, premium rates that reflect risks associated with producing the crop are necessary. Given the importance of estimating the yield/price distributions in setting new premium rates for previously uninsured crops, both parametric and

non-parametric approaches to modeling these probability

distributions have been used with each having advantages and disadvantages. This research develops more flexible parametric probability density function (pdf) models for estimating yield/price distributions and evaluates the relative impact of these flexible pdf models in crop insurance premium rate-setting. Data from several

crops in Texas will be collected and used to evaluate the

effectiveness of the models relative to other parametric approaches. It is expected that this study will provide a more realistic representation

of the yield and price distribution.

Keywords Insurance, Premiums, Probability Density Functions, Yield and Price

Distributions

Contact Investigator Roderick M. Rejesus

Project Title Profitability Analysis of Cotton Production for Major Cotton

Producing Regions of Texas

Principal Investigators Phillip Johnson

Collaborators and **Collaborating**

Joe Outlaw, Texas Cooperative Extension Service

Primary Funding

Agency

USDA (INTERNATIONAL COTTON RESEARCH CENTER)

(\$25,000 09/01/03 - 08/31/04)

Secondary Funding

Agency

Agencies

TTU, Thornton Agricultural Finance Institute (\$25,000 09/01/03 -08/31/04) and Applied Economics Research (\$2,643 09/01/03 -

08/31/04)

Funding Amount Total \$35,387

09/01/03 **Beginning Date Ending Date** 08/31/04

Project Objective To develop cotton cost of production and profitability information for

the major cotton producing regions of Texas.

Project Summary

Accomplishments

In order for cotton producers to make informed production, financial, and marketing decisions, accurate farm level cost of production information is required. This project integrates data from the FARM Assistance program and the Standardized Performance Analysis (SPA) database to develop cost of production, profitability, and breakeven analysis for cotton in major cotton producing regions of

Texas.

The accomplishments of the project include the completion of individual analysis for the 2002 crop year for cooperators in the Southern High Plains (SHP) region of Texas. Project participants in the SHP have provided their 2003 crop year information for analysis. At this time, cost of production and profitability information has only been compiled for the SHP region. The coordination of the SPA and Farm Assist programs to identify cooperators has been slower than

was anticipated

Keywords Standardized Performance Analysis, Financial Analysis

Contact Investigator Phillip Johnson

Project Title Providing Risk Management Tools for Producers Who Diversify Into

New or Specialty Crops

Principal Investigators Thomas O. Knight

Collaborators and

Collaborating

Agencies

Mississippi State University and University of Georgia

Primary Funding

Agency

Risk Management Agency - USDA

Funding Amount \$ 464,938

Beginning Date 9/1/02

Ending Date 3/31/05

Project Objective Analyze the effectiveness of existing and alternative methods for

crop producers to protect the counter-cyclical payment on a farm program crop when an alternative crop is planted on the base

acreage.

Project Summary

and

Accomplishments

The project examines the effectiveness of current futures and options contracts in protecting counter-cyclical payments when an alternative crop is grown on farm program base acreage. The potential benefits of alternative financial instruments designed specifically to protect against loss of counter-cyclical payments will also be explored. If

alternative instruments are found to have significant benefits, then prototypes of at least two such instruments will be developed.

Keywords Crop Insurance, Insurance Rating Procedures

Contact Investigator Thomas Knight

Project Title Quality Assessment of Major Textile Markets for Texas Cotton

Principal Investigators Conrad P. Lyford and M. Dean Ethridge

Collaborators and Collaborating Agencies **International Textile Center**

Primary Funding

Agency

USDA (ICRC)

Funding Amount \$33,000 Beginning Date 9/01/03 Ending Date 8/31/04

Project Objective Major objectives of the research are to:

1. Quantify threshold levels of key fiber properties enabling access to selected, higher-valued segments of the market;

- 2. Collect and evaluate data on the prices in selected market segments;
- 3. Evaluate the consumption levels and trends in the selected market segments;
- 4. Estimate the potential increases in revenues to the Texas cotton production and marketing sectors that would result from reaching alternative thresholds of fiber properties and serving alternative textile market segments.

Project Summary and

Accomplishments

Fiber properties of cottons determine the types of yarns, fabrics, and textile products that are made with them. Thus, a large portion of Texas cotton is used primarily to make coarser yarns (e.g., denim and other bottom-weight fabrics) on rotor spinning systems, while it is seldom used to make finer yarns (e.g., for dress shirts and lightweight knitted fabrics) on ring spinning systems. As a result, the market for much Texas cotton is restricted to lower valued segments of the total market for cotton fibers.

Keywords Cotton, Quality, Marketing

Contact Investigator Conrad Lyford

Project Title Reference Yield Update Methodology Project

Principal Investigators Tom Knight (TTU), Barry Goodwin (Consultant), Keith

Coble (Mississippi State), Roderick M. Rejesus (TTU)

Collaborators and Mississippi State University **Collaborating Agencies**

Primary Funding Agency USDA-RMA

Funding Amount \$177,656

Beginning Date 1/5/2004

Ending Date 6/21/2005

Project Objective To examine the current reference yield methods and

procedures in crop insurance premium rate setting and

make recommendations for improvement.

Project Summary and Accomplishments

Accurate premium rates are an essential element of an actuarially sound insurance program because adverse selection problems may occur if premiums do not accurately reflect an individual farmer's likelihood of loss. Current RMA rate-setting procedures for APH programs are primarily based on a continuous rating formula with county-specific parameters which include a reference rate, a reference yield, an exponent, and a fixed load. One implicit assumption is that the sum of the reference rate and the fixed load is representative of the risk that is expected to occur at the reference yield. Reference yields are currently based on the county average yield calculated using NASS data. On the other hand, the reference rates are based on historical loss experience data of insured producers Loss Cost Ratio (LCR) method so that reference rates and reference yields have been treated independently and have used separate data for their calculations. If there is inconsistency in the reference rates and reference yields, then the risk of loss is not accurately reflected in the premium rates charged and poor actuarial performance results. This project analyzes the reference yield procedures and makes

recommendations for improvements.

Keywords Premiums, Crop Insurance Rating, Reference Yields

Contact Investigator Roderick M. Rejesus

Project Title Spatial Analysis of Precision Agriculture Data: An Approach to

Improve Management Zone Delineation Procedures for Texas Cotton

Principal Investigators

Agencies

Roderick M. Rejesus (TTU), Eduardo Segarra (TTU), and Kevin

Bronson (TAES)

Collaborators and Collaborating

Kevin Bronson, Texas Agricultural Experiment Station (TAES)

Primary Funding

USDA CSREES (through the International Cotton Research Center

at TTU)

Agency

Funding Amount \$33,460

Beginning Date 9/1/2003

Ending Date 8/31/2004

Project Objective The objectives of this project are to: (1) develop and assess the

feasibility of using spatial statistical and spatial smoothing methods for delineating precision agriculture management zone and (2) compare economic consequences of using the management zone method with other currently available management zone delineation

methods for of Texas cotton production situations.

Project Summary

and

Accomplishments

The univariate spatial method for delineating management zones and

the economic evaluation of this method have been completed.

Further potential improvement in the method is currently being undertaken. Preliminary results of the project have been presented in

the 2004 Beltwide Cotton Conference and 2004 International

Conference on Precision Agriculture This project has been extended for another year to explore mutlivariate methods for management

zone delineation and their economic consequences.

Keywords Precision Agriculture, Management Zones, Spatial Econometrics,

Spatial Analysis

Contact Investigator Roderick M. Rejesus

Project Title Structural Models of the U.S. and the Rest-of-the-World Natural

Fiber Market

Principal Investigators Samarendu Mohanty

Collaborators and Collaborating Agencies Food and Agricultural Policy Research Institute at the University of

Missouri

Primary Funding

Agency

USDA (Congressional Initiative)

Funding Amount \$301,880 Beginning Date 09/01/03 Ending Date 8/31/04

Project Objective To develop and maintain the models, procedures, and expertise

needed to respond to Congressional requests for information, analysis, and advice on the natural fiber markets in response to potential change in U.S. and foreign agricultural policies.

Project Summary and

Accomplishments

This research develops and maintains a structural econometric model of the world fiber (cotton, wool and mohair) markets. The initial model was completed in 2003/04; The model includes supply and demand models for the United States and 23 other major producing and consuming countries. Regional cotton supply response models have been estimated for major countries (U.S., China, and India) and aggregate supply models are estimated for other countries or regions. Demand models include behavioral equations for supply of manmade fibers, substitutability between cotton and man-made fibers, and linkage between cotton and textile sectors.

The system was used for FAPRI's Nov. and Jan. baseline meetings to develop medium-term projections of the world cotton market and results were presented in the FAPRI baseline review meeting in Wash., D.C. in Dec., 2003. Final baseline projections were presented to Senate and House staff members, analysts at Economic Research Service and World Agricultural Outlook Board, commodity groups, and media groups in Mar., 2004. Results of the ongoing research were also disseminated through presentations in industry, professional meetings, and proceedings and journal article publications.

Keywords Structural Model, Cotton

Contact Investigator Samarendu Mohanty

Project Title Towards an Integrated Water Policy Planning Model for the Texas

High Plains

Principal Investigators David Willis, Das Biswaranjan

Collaborators and Collaborating Agencies Texas Water Resource Institute

Primary Funding

Agency

U. S. Geological Survey

Funding Amount \$5,000 Beginning Date 03/01/01 Ending Date 02/28/03

Project Objective General: Develop a spatially and temporally disaggregated water

policy model for irrigated production irrigation in the Texas High Plains. Specific: to link an existing MODFLOW groundwater model

of the Southern Ogallala Aquifer to a dynamic economic

optimization model.

Project Summary and

Accomplishments

The integrated water policy model will provide planners with a proactive planning tool and a means to both evaluate the net economic benefit of proposed water conservation policies and the level of conservation achieved by proposed policy. A detailed, spatially

disaggregated data base on water use, cropping patterns, groundwater pumplifts, and irrigation efficiency for irrigated agriculture in the Texas High Plains has been compiled. A 50-year dynamic economic optimization system for the 19 counties that collectively account for 96 percent of Texas water diversions from the Southern Ogalla Aquifer has been constructed. The county level economic model has been linked to a detailed MODFLOW groundwater model of the Southern Ogallala Aquifer and the linked model has subsequently been used to establish the 50-year baseline condition under the assumption of optimal producer response to increasing water scarcity over time given current water policy regulations, private economic incentives, and irrigation technology. The model will subsequently be used to estimate both the cost and quantity of groundwater conserved,

relative to the current condition, under alternative conservation

management strategies.

Keywords Water Policy, Texas High Plains

Contact Investigator David Willis

Project Title Treatment Technologies for Phosphorus Removal

Principal Investigators Cary Green, Vivien Allen and Phillip Johnson

Primary Funding

Texas Cattle Feeders Association

Agency

Funding Amount \$1,000

Beginning Date 09/01/03

Ending Date 12/31/03

Project Objective The objective of this project was to provide a comprehensive

literature review to expand the discussion of the technologies

available to remove P from feedlot wastewaters.

Project Summary

and

Accomplishments

A literature review of water treatment technologies designed for P reductions has been completed. The applicable technologies were summarized and compared. The technology to remove P by converting it to struvite was considered the most promissing.

A review of the literature with regard to the economic feasibility of the struvite technology has been completed. An economic evaluation of this technology for a feedyard situation will be completed.

Keywords Struvite, Wastewater, Feedyards

Contact Investigator Cary Green

Project Title U.S. Textiles Manufacturer's Pricing of Cotton Quality

Principal Investigators Conrad Lyford and Don Ethridge

Primary Funding

Cotton Inc.

Agency

Funding Amount \$ 18,000 Beginning Date 01/01/04 Ending Date 12/31/04

Project Objective

The general objective is to identify premium and discount levels for cotton fiber attributes. Specific objectives are:

A) To develop, expand and update the database of cotton purchases from textile mills.

B) To establish reliable estimates of price differentials paid for fiber attributes by textile mills, by production regions.

C) If regional differences persist, identify the reasons why different U.S. cotton producing regions receive differing prices.

D) To disseminate the information to the cotton industry.

Project Summary and

Accomplishments

The overall goal of this project is to improve information to market participants, thereby increasing the ability of producers to respond to mill preferences and mill buyers to more effectively purchase cotton that meets their quality specifications.

One key finding is that prices paid for quality at the mill level with those typically provided to producers at the producers level-- the loan rate and Agricultural Marketing Service (AMS) price quotations-- are often inconsistent. Producer incentives were found to (a) often not be closely aligned to mill incentives and (b) be relatively inflexible. This means that producers are often getting the wrong signals on quality, and this decreases producer profitability and textile manufacturing productivity. This suggests that improving the loan rate, AMS pricing information, or other price information might be useful in improving performance.

Keywords Cotton, Quality, Pricing

Contact Investigator Conrad Lyford

Project Title USDA Unit Division Structure Review

Principal Investigators Thomas O. Knight and Roderick Rejesus

Collaborators and Collaborating Agencies Mississippi State University and Ohio State University

Primary Funding

Agency

Risk Management Agency - USDA

Funding Amount \$174,895 Beginning Date 12/1/02 Ending Date 12/31/04

Project Objective Examine crop insurance rate differentials relating to alternative

insured unit structures.

Project Summary

and

Accomplishments

Current unit structures were reviewed and recommendations made regarding any proposed changes to those structures or reporting

requirements. Appropriate premium rate differentials were developed

based on current unit structures and underwriting procedures.

Alternative premium rating procedures have been developed and implementation procedures recommended. The impact of alternative

rating procedures on the crop insurance book of business was

analyzed.

Keywords Crop Insurance, Insurance Rating Procedures

Contact Investigator Thomas Knight

Project Title Water Conservation Policy Alternatives for the Southern Portion of

the Ogallala Aquifer

Principal Investigators Jeff Johnson, Phillip Johnson

Collaborators and

Collaborating Agencies

TTU Water Resource Center

Primary Funding

Agency

Applied Economics Research (\$2,643 09/01/03 - 08/31/04)

Secondary Funding

Agency

Texas Water Resource Institute (\$5,000 01/01/02 - 12/31/02)

Funding Amount \$7,643

Beginning Date 09/01/03

Ending Date 08/31/04

Project Objective Analyze the impact of water conservation policy alternatives, such as

quotas and water use fees, on the regional economy of the Southern

High Plains of Texas

Project Summary

and

Accomplishments

The study evaluated the effectiveness of three water conservation policy alternatives that are authorized for underground water

policy alternatives that are authorized for underground water

conservation districts to use by Texas Senate Bills 1 and 2. All three resulted in conservation of water in the aquifer, decreased water use,

and decreased net income for the region. The alternative of

restricting water use to 50% of the initial saturated thickness of the aquifer over 50 years was shown to be the most effective in terms of cost in forgone net agricultural income for each foot of saturated

thickness saved in the aquifer.

Keywords Water Conservation, Ogallala Aquifer, Groundwater

Contact Investigator Jeff Johnson

Project Title Water Conflict Resolution in the Lower Rio Grande Valley: A Game

Theoretic Approach

Principal Investigators David B. Willis

Primary Funding

Agency

unfunded

 Beginning Date
 01/02/04

 Ending Date
 08/14/05

Project Objective To determine the optimal form of compensation, in terms of either

dollars or water for Mexico to repay the United States for an

accumulated water debt of 1.5 million acre-feet.

Project Summary

and

Accomplishments

The water debt has accumulated because Mexico has failed to release the supply level specified in Article 4 of the 1944 Lower Rio Grande treaty. This research will estimate the marginal value function for irrigation water in both Texas and Mexico. Once the appropriate marginal values are established a dynamic game theory model will be developed to describe the proper forms of compensation to maximize the total net economic surplus accruing to both countries.

Water use, budgeting data, and agronomic data are being collected for the Lower Rio Grande Valley in Texas and the Mexican states

benefiting from the accumulative water debt.

Keywords Lower Rio Grande, Water, Texas, Mexico, Game Theory

Contact Investigator David Willis

Appendix B

RESEARCH FUNDING

2003/04

Research Funding (\$), Department of Agricultural and Applied Economics, Texas Tech University September 1, 2003 through August 31, 2004

		Internal	nal						External					
						State	ĘĘ.			Federal		Private		
	Applied Economics Fund	Thornton Institute	Other	TOTAL	Precision Ag. (TAMU)	CASNR REP	Other	Total	USDA	OTHER	Total	Ш	TOTAL EXTERNAL	GRAND
Elam												40,000	40,000	40,000
Ethridge												20,313	20,313	20,313
Johnson, Phil	10,571	28,952		39,523		484	3,821	4,305	32,500		32,500	3,821	40,626	80,149
Johnson, J.	1,259			1,259		483	3,822	4,395	7,500		7,500		11,805	13,064
Knight			11,000	11,000					473,850		473,850		473,850	484,850
Lansford	11,352			11,352										11,352
Lyford	6,711			6,711					66,334		66,334	12,938	79,272	85,983
Malaga	31,242			31,342					44,658		44,658		44,658	76,000
Middleton	6,140			6,140										6,140
Misra									35,000		35,000	16,000	51,000	51,000
Mohanty	17,400			17,400					301,880		301,880		301,880	319,280
Rejesus	16,333		12,800	29,133					179,605		179,605		179,605	208,738
Segarra	4,350			4,350	30,889	3,958		34,847	33,297		33,297		68,144	72,494
Willis	33,496			33,496		483		483	7,500	7,500 76,667	84,167		84,650	118,146
TOTAL	159,453*	28,952	23,800	212,205*	30,889	5,408	7,643	43,940	1,182,124 76,667		1,258,791	93,072	1,395,803	1,608,008*

¹ Includes general operating expenses, as well as allocations to research Principal Investigators

8/11/04

Appendix C

PUBLICATIONS

2003/04

JOURNAL ARTICLES

- ^cArmstrong, S., R. Boweman, P. Johnson and J. Blackshear. "Economic Evaluation of Short Season Bollgard Cotton Cultivars on the Texas High Plains." *Texas Journal of Agriculture and Natural Resources.* 16(Dec. 2003): (in press).
- Carlos, C., Ramirez, O., and S. Mohanty. "Methodological Issues on the Estimation of Supply Response." *Journal of Agricultural and Applied Economics*. 36, No. 2(Aug. 2004):(in press).
- *Chua, T.T., K.F. Bronson, J.D. Booker, J.W. Keeling, A.R. Mosier, J.P. Bordovsky, R.J. Lascano, C.J. Green, and E. Segarra. "In-Season Nitrogen Status Sensing in Irrigated Cotton: I. Yields and Nitrogen-15 Recovery." *Soil Science Society of America Journal*. 67(4, 2003): 1428-1438.
- Field, J., S. Misra, and O. Ramirez. "Evaluating Crop and Revenue Insurance Products as Risk Management Tools for Texas Crop Producers." *Journal of Agricultural and Applied Economics*. 35(2003): 39-52.
- 'Hall, D., T.O. Knight, K.H. Coble, G.F. Patrick, and A.E. Baquet. "Analysis of Beef Producers' Risk Management Perceptions and Desire for Further Risk Management Education." *Review of Agricultural Economics*. 25 (Fall/Winter 2003): 430-448.
- ^cJohnson, P. and J. Blackshear. "Economic Analysis of Roundup Ready Versus Conventional Cotton Varieties in the Southern High Plains of Texas." *Texas Journal of Agriculture and Natural Resources*. 16(Dec. 2003): (in press).
- ^rKnight, T.O., K.H. Coble, G.F. Patrick, and A.E. Baquet. "Risk Management Education: An Examination of Crop Producers' Participation in Recent Programs and of Their Desire for Additional Training." *Journal of Agricultural and Applied Economics*. 35 (2003): 571-587.
- Lyford, Conrad P., Dan Tilley and Jared Carlberg. "Strategic Management at the Oklahoma Wheat Commission: Producer Organizations Can Do It Too." *Review of Agricultural Economics*. 25(2; Fall/Winter 2003): 540-548.
- ^{c.i}Mohanty, S., C. Fang, and J. Chaudhary. "Assessing Competitiveness of Indian Cotton Production: A Policy Analysis Matrix Approach." *Journal of Cotton Science*. 7(2003): 65-74.
- ⁱRajendran, K., and S. Mohanty. "Dairy Cooperatives and Milk Marketing in India: Constraints and Opportunities." *Journal of Food Distribution Research*. 35, No. 2 (Jul. 2004): 35-40.
- Ramirez, O., S. Misra, and J. Field. "Crop Yield Distribution Revisited." *American Journal of Agricultural Economics*. 85(2003): 108-120.

- Ramirez, O., S. Misra, and J. Nelson. "Efficient Estimation of Agricultural Time Series Models with Non-normal Dependent Variables." *American Journal of Agricultural Economics*. 85(2003): 1029-1040.
- ^rRejesus, R.M. "Ex-post Moral Hazard in the U.S. Crop Insurance Program: Costly State Verification or Falsification?" *Economic Issues*. 8, No. 2 (Sept. 2003): 29-45.
- ^rRejesus, R.M. and B. Little. "Yield Coverage Levels as Deductibles in Crop Insurance Contracts: Is the Effect on Falsification Behavior Significant?" *Southwestern Economic Review.* 31, No. 1 (Spring 2004): 79-97.
- ^{c,} Rejesus, R.M. and A.C. Lovell. "Are Added Land and New Producer Provisions in Crop Insurance Vulnerable to Abuse? The Case of Insured Texas Cotton Producers." *Journal of Cotton Science.* 7, No. 3 (Oct. 2003): 75-85.
- ^rRejesus, R.M., A.C. Lovell, B. Little, and M.H. Cross. "Determinants of Anomalous Prevented Planting Claims: Theory and Evidence from Crop Insurance." *Agricultural and Resource Economics Review.* 32, No. 2 (Oct. 2003): 244-258.
- Rejesus, R.M., R.H. Hornbaker, and A. Hansen. "The Costs of Using E-Diesel to Reduce Emissions from Agricultural Machinery." *Journal of Sustainable Agriculture*. 24, No. 2 (June 2004): 63-75.
- "Yu, M., E. Segarra, R. Lascano, and J. Booker. "Economic Impacts of Precision Farming in Irrigated Cotton Production." *Texas Journal of Agriculture and Natural Resources*. 16 (Dec. 2003): 1-14.
- ^{c,w}Willis, David B., Megan Britt, and Octavio Ramirez. "The Impact of Increased Electricity Rates on Input Use and Irrigated Cotton Profitability in the Texas High Plains: A Hedonic Profit Maximization Approach." *Texas Journal of Agriculture and Natural Resources*. 16: (Dec. 2003): (in press).

BOOKS/CHAPTERS

Ethridge, Don. Research Methodology in Applied Economics; Organizing, Planning, and Conducting Economic Research, 2nd edition, Ames, Iowa: Blackwell Publishing, 2004.

TECHNICAL BULLETINS AND REPORTS

Allen, V.G., E. Segarra, and P. Brown. "The Value of the Forage Crop in Texas or The Cinderella Crop." *The Grassland Society of Australia*. 246 (Nov. 2003): 12-14.

- Allen, V.G., E. Segarra, and P. Brown. "Integrated Crop/Forage/Livestock Systems Approach for the Texas High Plains: Project Summaries and Other Related research Studies." Annual Report submitted to the Southern Region SARE/ACE Program, United States Department of Agriculture, under project number LS97-82, College of Agricultural Sciences and Natural Resources, Texas Tech Univ., May 2004.
- *Bordovsky, J. P., E. Segarra, and D. Porter. "Development and Evaluation of Dual Applicator (LEPA and Spray) Pivots. Annual Report submitted to the Texas Water Resources Institute Texas A&M University, Texas Agricultural Experiment Station, Texas A&M University, Oct. 2003.
- ^rCoble, K.H., T.O. Knight, R.M. Rejesus, Y. Jin, and O. Vergara. "USDA Experience-Based Premium Discount Report." Final Project Report Prepared for the RMA (Oct. 2003).
- ^cEthridge, Don, and Lauren Lovelace. "Annual/Report on Cotton Economics Research, 2002/03." Cotton Economics Research Institute, Texas Tech Univ., Sept. 2003.
- Ethridge, Don, Lauren Lovelace, and Judy Schreiber. "Annual Report, Research Program; 2002/03." Dept. of Agricultural and Applied Economics, Texas Tech Univ., Sept. 2003.
- ^cFadiga, Mohamadou, S. Misra, and Don Ethridge. "Texas-Oklahoma Producer Cotton Market Summary: 2003/04." CER #04-06, Cotton Economics Research Institute, Texas Tech Univ., Aug. 2004.
- 'Goodwin, B.K., T.O. Knight, K.H. Coble, R.M. Rejesus, and S. Shaik. "Current Reference Yield Analysis Report." First Deliverable of the Reference Yield Update Methodology Project, Prepared for the RMA (July 2004).
- WJohnson, J.W. and K. Schwartz. "Water Economics Publications 1961-2003." Department of Agricultural and Applied Economics, Texas Tech University. College of Agricultural Sciences and Natural Resources Report T-1-585. Aug. 2004.
- ^rKnight, T.O., K.H. Coble, B.K. Goodwin, and R.M. Rejesus. "USDA Unit division Structure Review." Final Project Report, Prepared for the RMA (April 2004).
- ^{c.i}Pan, S., M. Fadiga, S. Mohanty, and D. Ethridge. "Structural Models of the U.S. and the Rest-of-the-World Natural Fiber Market." CER # 04-03, Cotton Economics Research Institute, Texas Tech Univ., Mar. 2004.
- c.iPan, S., S. Mohanty, D. Ethridge, and M. Fadiga. "The Impacts of U.S. Cotton Programs on the World Market: An Analysis of Brazilian and African WTO Petitions." Cotton Economics Research Institute, Texas Tech Univ., Jan. 2004.
- ^{c,i} Pan, Suwen, Samarendu Mohanty, Don Ethridge, and Mohammadou Fadiga. "The Impacts of U.S. Cotton Programs on the World Market: An Analysis of Brazilian and African WTO Petitions." Cotton Economics Research Institute, Texas Tech Univ., Jan. 2004.

^cSanders, Dane, Pallavi Wankhede, Sukant Misra, and Don Ethridge. "Texas-Oklahoma Producer Cotton Market Summary; 2002/03." Cotton Economics Research Institute, Texas Tech Univ., CER-03-04, Sept. 2003.

PROCEEDINGS PAPERS

- c.iFadiga, M., S. Mohanty, S. Pan, and D. Ethridge. "The Impacts of U.S. Cotton Programs on World Market: An Analysis of Brazilian WTO Petition." Paper Presented at the 2004 Meeting of the American Agricultural Economics Association. Full paper posted in *AgEcon Search* (http://agecon.lib.umn.edu).
- ^cFadiga, M.L., S.K. Misra, and O.A. Ramirez. "Estimation of U.S. Consumer Purchase Decision and Demand for Apparel: Implications for the Apparel Industry." *2004 Beltwide Cotton Conferences Proceedings*, Natl. Cotton Council, Memphis, TN. Vol. 1:488.
- WJohnson, J.W., P. Johnson, K. Rainwater, E. Segarra, and D. Willis. "Evaluation of Water Policy Alternatives Intertemporal Allocation of Groundwater in the Southern High Plains of Texas." 2004 Conference of the Universities Council on Water Resources. Portland, OR. July 20, 2004. CD-ROM.
- ^{c,w}Johnson, J.W., P. Johnson, E. Segarra, and D. Willis. "Water Conservation Policy Alternatives for the Texas Southern High Plains." *2004 Beltwide Cotton Conferences Proceedings*, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^{c,w}Johnson, Jeff, Phil Johnson, Eduardo Segarra, and David Willis. "The Future of Irrigated Cotton Acreage on the Texas High Plains." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^{c,w}Lansford, Vernon D., E. Segarra, and J.P. Bordovsky, "The Dollars and Cents of Subsurface Drip Irrigation (SDI) for Cotton in the Southern High Plains of Texas." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^{c,i}Lopez, J.A. and J. Malaga. "One or Many European United Cotton Demands?" 2004 Beltwide Cotton Conferences Proceedings. National Cotton Council, Memphis, TN. CD-ROM.
- ^{c.i} Lopez, J.E. and J. Malaga. "Effects of MFA Quota Elimination: Declining U.S. Exports to Mexico?" 2004 Beltwide Cotton Conferences Proceedings, National Cotton Council, Memphis, TN. CD-ROM.
- ^cLyford, Conrad and Mark Welch. "Cost Competition for U.S. Textiles: Will Yarn Follow the Needle?" 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^cLyford, Conrad and Sangnyeol Jung. "Mill Prices for Quality: Are the Signals Getting Through?" 2004 Electronic Fiber Selection System Conference, Cotton, Inc., Cary, NC. CD-ROM.

- ^cLyford, Conrad, Sangnyeol Jung and Don Ethridge. "The Mill-Level Price of Quality Cotton in the U.S.", 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^cMcCormic, M., P. Dotray, J. W. Keeling, T. Baughman, E. Segarra, and W. R. Perkins. "Economic Comparison of Liberty-Tolerant Cotton." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^cMcCormick, K. M., P. A. Dotray, J. W. Keeling, T. A. Baughmman, E. Segarra, and W. R. Perkins. 2004. Efficacy of Glufosinate-Tolerant Cotton." 2004 Southern Weed Science Society Conference Proceedings. 57:32.
- ^cMusunuru, N., E. Segarra, S. J. Mass, and R. McDonald. "Potential Economic Benefits of Adjusting Cotton Dryland Practices Based on Seasonal Rainfall Expectations." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^{c.i}Peabody, Phillip, Sam Mohanty, David Willis, and Jaime Malaga. "The Future of U.S. Cotton Exports: Prospects and Uncertainties." *2004 Beltwide Cotton Conferences Proceedings*, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^cSanders, D., S. Misra, and D. Ethridge. "An Estimated 2003 Texas-Oklahoma Pre-Season Price Schedule based on Market History." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. Vol. 1:658.
- ^cSanders, Dane, Sukant Misra, and Don Ethridge. "Texas-Oklahoma Producer Cotton Market Summary: 2002/2003." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. Vol. 1:684.
- ^cSides, G., and P. Johnson. "Profitability of Cotton Production in the Texas High Plains, 1996-2002." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.
- f.cSides, G., and P. Johnson. "Business and Financial Risk of Cotton Producers in the Texas High Plains." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^{c.i}Vado, L., D. Willis, and S. Mohanty. "Future Potential of Brazilian Cotton Exports." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^cVelandia, M., R.M. Rejesus, E. Segarra, and K. Bronson. "An Economic Analysis of A Spatial Statistics Approach to Management Zone Delineation in Precision Agriculture: The Case of Texas Cotton." In R.H. Rust, and W.E. Larson (eds.), *Proceedings of the Seventh International Conference on Precision Agriculture*, Bloomington, MN (July 25-28, 2004).
- ^c Velandia, M., R.M. Rejesus, E. Segarra, and K. Bronson. "Spatial Analysis of Precision Agriculture Data: An Approach to Improve Management Zone Delineation Procedures for

- Cotton." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.
- ^cWatson, S. D. Hudson, and E. Segarra. "Economic vs. Biological Goals in Technology Adoption." 2004 Beltwide Cotton Conferences Proceedings, Natl. Cotton Council, Memphis, TN. CD-ROM.

ABSTRACTS

- *Das, B., D. Willis, and J. Johnson. "Towards a Comprehensive Regional Water Policy Model for the Texas High Plains." *Journal of Agricultural and Applied Economics*. 36 No. 2 (Aug. 2004): (in press).
- ^cDuch, T., V. G. Allen, E. Segarra, and C. P. Brown. "Economic Sustainability of an Integrated Cotton-Forage-Livestock Production System." 2003 Crop Science Society of America Abstracts. CD-ROM.
- WJohnson, J.W., P. Johnson, E. Segarra, and D. Willis. "Evaluation of Water Conservation Policy Alternatives for the Southern High Plains of Texas." *Journal of Agricultural and Applied Economics*. 36, No. 2 (Aug. 2004): (in press).
- Johnson, Jeff, Phil Johnson, Eduardo Segarra, and David Willis. "Evaluation of Water Conservation Alternative for the Texas High Plains." *Journal of Agricultural and Applied Economics*. 36, No. 2 (Aug. 2004): (in press).
- ^{c.i}Lopez, J.A. and J. Malaga. "European Union Cotton Demand: An Application of Demand Systems and Panel Data." *Journal of Agricultural and Applied Economics*, 36 (Aug. 2004): (in press).
- c.iLopez, J.E. and J. Malaga. "The ATC Quota Elimination and the Mexican Cotton Industry: Measuring Potential Impacts on U.S. Cotton Exports." *Journal of Agricultural and Applied Economics*. 36 (Aug. 2004): (in press).
- ^cLyford, Conrad and Mark Welch. "Measuring Competition for Textiles: Does the U.S. Make the Grade?" *Journal of Agricultural and Applied Economics*. 36 (Aug. 2004): (in press).
- ^cLyford, Conrad, Sangnyeol Jung and Don Ethridge. "Mill–Level Price Estimates for U.S. Cotton Quality." *Journal of Agricultural and Applied Economics*. 36 (Aug. 2004): (in press).
- ^{c,i}Vado, Ligia, David B. Willis, and Sam Mohanty. "Cotton Supply Response in Brazill: Traditional versus Expansion Region." *Journal of Agricultural and Applied Economics*. 36(Aug. 2004): (in press).
- ^cVelandia, M., R. Rejesus, E. Segarra, K. Bronson, and R. Kulkarni. "An Economic Analysis of a

- Spatial Statistics Approach to Management Zone Delineation in Precision Agriculture: The Case of Texas Cotton." *Seventh International Conference on Precision Agriculture: Conference Abstracts Profitability Section*, pg. 125, 2004.
- Watson, S., D. Hudson, and E. Segarra. "Quantifying the differences in Management Goals and Technology Choice in Peanut Production." *Journal of Agricultural and Applied Economics*. 36 (Aug., 2004): (in press).

THESES AND DISSERTATIONS

- "Johnson, J.W., "Water Conservation Policy Alternatives for the Southern Portion of the Ogallala Aquifer." PhD Dissertation, Department of Agricultural and Applied Economics, Texas Tech University, Dec. 2003.
- c.i Li, Hongyuan, "The Policy Simulation Model of Chinese Fiber Markets." M.S. Thesis, Department of Agricultural and Applied Economics, Texas Tech University, Dec. 2003.
- c.i Lopez, Jose Enrique, "An Econometric and Simulation Model of the Mexican Cotton Industry."
 M.S. Thesis, Department of Agricultural and Applied Economics, Texas Tech University, Dec. 2003.
- c,i Lopez, Jose Antonio, "Econometric Modeling of the European Union Cotton Demand," M.S. Thesis, Department of Agricultural and Applied Economics, Texas Tech University, May 2004.
- Musunuru, Naveen Kumar, "Potential Economic Benefits of Adjusting Dryland Cropping Practices Based on Seasonal Rainfall Expectations." Ph.D. Dissertation, Department of Agricultural and Applied Economics, Texas Tech University, Dec. 2003.
- ⁱRenteria, Rolando Sammy, "An Econometric Analysis of the Future of Indian Food Supply and Demand." M.S. Thesis, Department of Agricultural and Applied Economics, Texas Tech University, Dec. 2003.
- ^{c,i} Vado, Ligia A., "Estimating Brazilian Cotton Supply Response: A Linear Supply System Approach." M.S. Thesis, Department of Agricultural and Applied Economics, Texas Tech University, May 2004.
- Youngblood, Jay Lee, "Evaluation of <u>Bacillus thuringiensis</u> Technology in Texas Corn Production." M.S. Thesis, Department of Agricultural and Applied Economics, Texas Tech University, Dec. 2003.

Appendix D

PRESENTATIONS THAT WERE NOT PUBLISHED IN ANY OUTLET

2003/04

- "Chizinski, C.J., K.L. Pope, D.B. Willis, G.R. Wilde, and E.J. Rossman. "Economic Value of Fishing at a Low-use Reservoir." Selected Paper presented at The Texas Water Summit: Focusing on Water for Agriculture and Natural Resources. Austin, TX. Nov. 6-7, 2003.
- c.f Johnson, P. "Development of Web-Based Cotton Production Cost Calculator." Presentation to the Fourth Annual Research/Extension Symposium sponsored by the Cotton Economics Research Institute, Lubbock, TX. Mar. 21, 2004.
- WJohnson, P. "Whiskey is for Drinking and Water is for Fighting." Presentation to the Cooperative Managers Conference sponsored by the Texas Agricultural Cooperatives Council, Ruidoso, NM. Jul. 15, 2004.
- ⁱMalaga, Jaime. "The Cuban Food Market: Window of Opportunities for West Texas Agriculture." Presented at the Conference: "Doing business with Cuba." Lubbock Chamber of Commerce, Lubbock, TX. Feb. 2004.
- ⁱMalaga, J. "Mexico Buys More than Europe?: The Mexican Market for US Agricultural Exports." Presentation at the Cooperative Managers Conference sponsored by the Texas Agricultural Cooperatives Council, Ruidoso, NM. Jul. 2004.
- ⁱMalaga, J. and F. Adcock. "U.S.-Chile Free Trade Agreement: What is there for Agriculture?" Presentation at the Annual Meetings of the American Agricultural Economics Association, Denver, CO. Aug. 2004.
- ^{c,i}Mohanty, S., "Global Cotton Market Outlook." Presented at the Cotton Economics Research Institute Agricultural Outlook Conference, Lubbock, TX, May 2004.
- ^{c.i}Mohanty, S., "World Cotton Baseline Projections." Presented to both House and Senate staff members, Economic Research Service, USDA, and Commodity Groups, Wash., DC, Mar. 2004.
- ^{c,i}Mohanty, S., "The Impacts of U.S. Cotton Programs on World Market: An Analysis of Brazilian WTO Petition." Presented at the Fourth Annual Cotton Economics Research Institute Research/Extension Symposium, Lubbock, TX, Mar. 2004.
- c.iMohanty, S., "The Global Perspective on Cotton Market." Presented at the Texas Cotton Association Annual Flow Meeting, Lubbock, TX, Oct. 2003.
- ^{c,i}Mohanty, S. and J. Malaga. "Global Cotton Market Outlook." Presentation at the Ad Hoc World Outlook Conference, Sao Paolo Brazil, May 2004.
- Segarra, E., "Enhancing Your Success in Graduate School." Theses/dissertation Symposium Graduate School, Texas Tech University, Lubbock, TX, Oct. 16, 2003.
- Segarra, E., "The Economics of sustainable Crop/Livestock Systems in the Texas High Plains." Texas Tech Farm, New Deal, TX, June 18, 2004.

Appendix E

NOTES ON COTTON ECONOMICS RESEARCH ADVISORY COMMITTEE MEETING

October 3, 2003

Agenda for Cotton Economics Research Advisory Committee Meeting October 3, 2003

7:00 a.m. Breakfast, AAEC Conference Room (Ag. 302) Advisory Committee Members and Dean's Office 8:00 a.m. Convene in AAEC Conference Room (Ag. 302) Remarks by Interim Dean Marvin Cepica and reports by individual PI's on projects, with discussion on any aspects of the project that the committee wishes to pursue. 8:00 Dr. Eduardo Segarra 8:15 Dr. Rod Rejesus 8:45 Dr. Jaime Malaga 9:00 Dr. Sukant Misra 9:20 Ginger Sides 9:30 Dr. Emmett Elam 9:45 Break 10:00 Dr. Vernon Lansford 10:15 Dr. Conrad Lyford 10:30 Dr. Sam Mohanty 11:00 a.m. Meet with students working on Cotton Economics projects (Ag. 302) Noon Lunch, Formby Room, Southwest Collections, Advisory Committee, PI's, Dean's Office, Dean Ethridge and Dick Auld invited. 1:15 p.m. Reconvene in AAEC Conference Room, Review of past year's activities, new research initiatives, etc. 1:45 p.m. Committee meeting, excluding department and college representatives, for Discussion of progress and activities. 2:30 p.m. Recommendations, etc., provided to the department; faculty encouraged to attend. 3:00 p.m. Adjourn.

Notes on Cotton Economics Research Advisory Committee Meeting; 10-3-03

The Committee convened for breakfast at 7:00 a.m. in the AAEC Conference Room (Ag. Sci. 302). In attendance were Mr. Leslie Meyer, Dr. Bill Norman, Mr. Lynn Scherler, Dr. Ed Smith, Dr. Jaroy Moore, Mr. Steve Verett, Mr. Chuck Thompson, and Mr. Ross Barber. Interim Dean Marvin Cepica and Associate Deans Norman Hopper and Sukant Misra were also there, along with Don Ethridge. Introductions and brief remarks about the day's activities were made. A copy of the day's program is attached.

The Committee re-convened at 8:00 a.m. in the AAEC Conference Room, where other departmental faculty joined the group. Dr. Cepica gave information about CASNR activities, and then individual faculty Principal Investigators summarized their Cotton Economics Research projects. Committee members posed questions and offered perspective on the projects. At 11:00 a.m., departmental students working on cotton projects met with the Committee.

The Committee and departmental faculty had lunch in the Formby Room at the Southwest Collections, and then re-convened in the Conference Room. Ethridge provided an overview perspective of the program, answered the Committee's questions, and asked the Committee's input on broadening the Advisory Committee to the overall departmental research program; he then excused himself from the meeting in order to participate in a CASNR briefing also occurring that afternoon. The Committee then went into its executive session to discuss the programs and their observations and recommendations.

At 2:45 p.m., the faculty (Drs. Phillip Johnson, Emmett Elam, David Willis, Conrad Lyford, Jaime Malaga, and Rod Rejesus) re-convened with the Committee to hear comments and suggestions. The Committee noted several positives; the main points emphasized were:

- 1. The Committee commended the department on its strong research program in cotton economics. They indicated that the department should continue to maintain a strong research focus on cotton. In particular, they pointed out the coordination of research programs and recommended that the cotton economics research program continue taking a systems approach.
- 2. The Committee recommended that we should continue to seek ways to deliver research to the cotton industry and in particular to cotton producers. Dr. Ed Smith recommended that we should seek to establish a connection to the regional extension program leaders under the reorganized Cooperative Extension Service to integrate the department's research with the extension outreach. It was also suggested that we may target agricultural lenders as a means to disseminate research information to producers. The committee commented that the web-based programs were very useful. It was also suggested that it might be a good idea to make "Texas Tech

University" more prominent on the newsletters, fact sheets, and publications to highlight the source of the information.

- 3. The Committee suggested research in cottonseed as an area of new research. They suggested that this research focus on marketing, demand analysis, infrastructure and pricing. The market for cottonseed has changed significantly in the past few years and particularly in this region due to the growth of the dairy industry.
- 4. The Committee suggested that an expansion of the advisory committee by two additional members in the areas of water resources and grain sorghum would be advisable. They expressed some reservation to expanding the committee at this time with a member that was primarily focused on livestock. They felt that committee representatives in water resource area and grain sorghum would complement the present make-up of the committee and provide some additional perspective.

The meeting adjourned at 3:30 p.m.

Appendix F

ADVISORY COMMITTEE MEMBERS

1996/97 - 2004/05

Cotton Economics Research Advisory Committee Members

1996/97

Dr. John Abernathy, Director

Texas A&M Research and Extension Center

Lubbock, Texas

Mr. Roy Baker, Research Leader

Cotton Production & Procession Research Unit

Agricultural Research Service, USDA

Lubbock, Texas

Mr. George Herron, Vice President Cotton Procurement, Dan River Mills

Danville, Virginia

Dr. Carl Anderson

Extension Economist-Cotton Marketing

Texas A&M University College Station, Texas

Mr. Tommy Fondren

Cotton farmer and agribusinessman

Lorenzo, Texas

Mr. Bob Poteet, Executive Vice President

Texas Cotton Association

Dallas, Texas

1997/98

Dr. Carl Anderson

Extension Economist-Cotton Marketing

Texas A&M University College Station, Texas

Mr. Tommy Fondren

Cotton farmer and agribusinessman

Lorenzo, Texas

Mr. Robert Joseph, President

International Cotton Marketing, Inc.

Lubbock, Texas

Mr. Roy Baker, Research Leader

Cotton Production & Processing Research Unit

Agricultural Research Service, USDA

Lubbock, Texas

Mr. George Herron, Vice President

Cotton Procurement, Dan River Mills

Danville, Virginia

Dr. James Supak, Associate Head

Soil and Crop Sciences

Texas A&M University

College Station, Texas

1998/99

Dr. Carl Anderson, Cotton Marketing Specialist

Texas Agricultura Extension Services

Texas A&M University

College Station, Texas

Mr. Tommy Fondren

Cotton farmer and agribusinessman

Lorenzo, Texas

Mr. Robert Joseph, President

International Cotton Marketing, Inc.

Lubbock, Texas

Mr. Roy Baker, Research Leader

Cotton Production & Processing Research Unit

Agricultural Research Service, USDA

Lubbock, Texas

Mr. George Herron, Vice President

Cotton Procurement, Dan River Mills

Danville, Virginia

Dr. James Supak, Associate Head

Soil and Crop Sciences

Texas A&M University

College Station, Texas

1999/00

Dr. Carl Anderson, Cotton Marketing Specialist Texas Agricultural Extension Service Texas A&M University College Station, Texas

Mr. Robert Joseph, President International Cotton Marketing, Inc. Lubbock, Texas

Dr. James Supak, Associate Head Soil and Crop Sciences Texas A&M University College Station, Texas

Mr. Steve Verett, Executive Vice President Plains Cotton Growers Lubbock, Texas

Dr. Carl Anderson, Cotton Marketing Specialist Texas Agricultural Extension Services Texas A&M University College Station, Texas

Mr. Curtis Griffith, CEO City Bank Lubbock, Texas

Dr. Jaroy Moore, Resident Director Texas Agricultural Experiment Station Lubbock, Texas

Mr. Steve Verett, Executive Vice President Plains Cotton Growers Lubbock, Texas

Dr. Carl Anderson, Cotton Marketing Specialist Texas Agricultural Extension Services Texas A&M University College Station, Texas

Mr. Curtis Griffith, CEO City Bank Lubbock, Texas Mr. Curtis Griffith, CEO City Bank Lubbock, Texas

Mr. Darryl Lindsey, Vice President Plains Cotton Cooperative Association Lubbock, Texas

Dr. Dan Upchurch, Director Cropping Systems Research Laboratory USDA-Agricultural Research Services Lubbock, Texas

Mr. Tony Williams, Executive Vice President Texas Cotton Ginners Association Austin, Texas

2000/01

Mr. Carleton Davis, Economist Dunavant Enterprises, Inc. Memphis, Tennessee

Mr. Darryl Lindsey, Vice President Plains Cotton Cooperative Association Lubbock, Texas

Dr. Dan Upchurch, Director Cropping Systems Research Laboratory USDA-Agricultural Research Service Lubbock, Texas

Mr. Tony Williams, Executive Vice President Texas Cotton Ginners Association Austin, Texas

2001/02

Mr. Carleton Davis, Economist Dunavant Enterprises, Inc. Memphis, Tennessee

Dr. Jaroy Moore, Resident Director Texas Agricultural Experiment Station Lubbock, Texas

2001/02 (continued)

Mr. Vern Tyson Sara Lee Knit Products National Textiles Winston-Salem, North Carolina

Mr. Steve Verett, Executive Vice President Plains Cotton Growers Lubbock, Texas Dr. Dan Upchurch, Director Cropping Systems Research Laboratory USDA-Agricultural Research Service Lubbock, Texas

Mr. Tony Williams, Executive Vice President Texas Cotton Ginners Association Austin, Texas

2002/03

Mr. Carlton Davis, Economist Dunavant Enterprises, Inc. Memphis, Tennessee

Dr. Jaroy Moore, Resident Director Texas Agricultural Experiment Station Lubbock, Texas

Mr. Lynn Scherler, Vice President Cobank - Agribusiness Banking Group Lubbock, Texas

Mr. Vern Tyson National Textiles Winston-Salem, North Carolina Mr. Leslie Meyer, Agricultural Economist USDA, Economic Research Service Washington, DC

Dr. Bill Norman, Vice President Ginning Services National Cotton Council Memphis, Tennessee

Dr. Edward G. Smith, Associate Director Agricultural and Natural Resource Sciences Texas A&M University College Station, Texas

Mr. Steve Verett, Executive Vice President Plains Cotton Growers Lubbock, Texas

2003/04

Mr. Ross Barber, Vice President Dunavant Entriprises, Inc. Lubbock, Texas

Dr. Jaroy Moore, Resident Director Texas Agricultural Experiment Station Lubbock, Texas

Mr. Lynn Scherler, Vice President Cobank - Agribusiness Banking Group Lubbock, Texas

Mr. Chuck Thompson, Owner and Manager Southwest Textiles Abernathy, Texas Mr. Leslie Meyer, Agricultural Economist USDA Economic Research Service Washington, DC

Dr. Bill Norman, Vice President Ginning Services National Cotton Council Memphis, Tennessee

Dr. Edward G. Smith, Associate Director Agricultural and Natural Resource Sciences Texas A&M University College Station, Texas

Mr. Steve Verett, Executive Vice President Plains Cotton Growers Lubbock, Texas

AAEC Department Research Advisory Committee Members

2004/05

Mr. Ross Barber, Vice President Dunavant Entriprises, Inc. Lubbock, Texas

Mr. Leslie Meyer, Agricultural Economist USDA Economic Research Service Washington, DC

Dr. Bill Norman, Vice President Ginning Services, National Cotton Council Memphis, Tennessee

Dr. Edward G. Smith, Interim Director Texas Cooperative Extension Texas A&M University College Station, Texas

Mr. Steve Verett, Executive Vice President Plains Cotton Growers Lubbock, Texas Mr. Jim Conkwright, Manager High Plains Underground Water Conservation District Lubbock, Texas

Dr. Jaroy Moore, Resident Director Texas Agricultural Experiment Station Lubbock, Texas

Mr. Lynn Scherler, Vice President Cobank - Agribusiness Banking Group Lubbock, Texas

Mr. Chuck Thompson, Owner and Manager Southwest Textiles Abernathy, Texas

Mr. Tim Snyder, Marketing Director National Sorghum Producers Association Lubbock, Texas

Appendix G

CERI RESEARCH/EXTENSION SYMPOSIUM

March 31, 2004



Funding Provided by

College of Agricultural Sciences and Natural Resources, Texas Tech University

Cotton Incorporated

Sponsored by

College of Agricultural Sciences and Natural Resources, Texas Tech University

Texas Cooperative Extension Texas A&M University System

4th Annual Research/Extensio Symposium



Cotton Economics Research Institute gricultural & Applied Economics Departm Texas Tech University

Box 42132

Texas Tech University Lubbock, TX 79409-2132

Phone: 806-742-2821

Fax: 806-742-1099 Email: cer@ttu.edu

Date: March 31, 200

Fime: 11:45 an

Merket Alumni Center Texas Tech University



The Cotton Economics Research the University. It focuses on economic ordinate and foster economic research versity and with research units outside research, but also coordinates and co-(CER) Institute serves as a unit to coactivities on all aspects of cotton across units within Texas Tech Uniboth economic and non-economic in operates with other research efforts, their primary intent.

The objectives of the Institute are to:

research on all aspects of cotton (e.g., 1) facilitate the conduct of economic production, marketing, trade, processing, value added), particularly in Texas; 2) coordinate economic research at Texas Tech University with other research efforts within the University and with other research institutions; 3) foster the dissemination of research and industry/ both disciplinary/ professional outlets results in public outlets

í (EVENTS SCHEDDIE SCHEDIE SCHEDDIE SCHEDIE SCHEDDIE SCHEDDIE SCHEDDIE SCHEDDIE SCHEDDIE SCHEDDIE

11:45 am: Luncheon

Welcome and Introduction Dr. Don Ethridge 12:15 pm:

Comments by CASNR Interim Dean, Dr. Marvin Cepica, TTU Director for Agriculture and Comments by Associate Dr. Ed Smith, TAMU Natural Resources, 12:20 pm: 12:30 pm:

RESEARCH SESSION

12:45 pm: "Web-based Production Cost Dr. Phil Johnson Calculator"

"West African WTO Proposal: Impact on Cotton Industry" Dr. Sam Mohanty 1:15 pm:

Break

1:45 pm:

"Insurance Issues: Implications for Cotton" 2:15 pm:

Dr. Tom Knight

Relevance to Cotton Industry"
Dr. Vivien Allen "Demonstration Project: 2:45 pm:

Break 3:15 pm:

EXTENSION SESSION

"Recent Developments in Lower Coastal Bend Cotton Production, Economics, and Marketing" Dr. Larry Falconer 3:30 pm:

"The Farm Assistance 4:00 pm:

Program" Dr. Steven Kclose

PANEL SESSION

Comments by Panel Members Mr. Wendell Barrick Mr. Jimmy Clark Mr. Rex Isom 4:30 pm:

WRAP UP SESSION

Open Session for Comments and Discussions 5:15 pm:

EVENING ACTIVITIES

"Attitude-Adjustment" Hour 6:00 pm:

7:00 pm:

Cotton Economics Research Institute Dr. Sukant Misra, Associate Director Contact person:

Texas Tech University Lubbock, TX 79409-2132 Box 42132

Phone: 806-742-2821 Fax: 806-742-1099 Email: cer@ttu.edu

Appendix H

CERI COMMODITY OUTLOOK CONFERENCE

May 14, 2004

Agricultural Outlook Conference 9:30 a.m.

Funding Provided by:

USDA-CSREES Grant



Department of Agricultural and Applied Economics, Texas Tech University

Department of Agricultural and Applied Economics, Texas Tech University Box 42132 Lubbock, TX 79409 Phone: 806-742-2821 Fax: 806-742-1099 www.ceri.ttu.edu/policy/

Vision/Objectives

Cotton Policy Analysis Objectives:

- To prepare medium-term outlook for the U.S. and world cotton market.
- To analyze the effects of alternative policies and external factors on production, utilization, farm and retail prices, farm income, trade, and government costs.
- To brief staff members of the U.S. Senate and House Agriculture Committees on projections for U.S. and world cotton markets.

Schedule of Events

- 9:30-9:45 Gathering
- 9:45-10:00 Welcome Dr. Don Ethridge Texas Tech University
- 10:00-10:15 Industry Representative Mr. Tlm Snyder, Marketing DIrector, National Grain Sorghum Producers
- 10:15-10:45 Role of FAPRI Consortium inFarm Bill Making Process Dr. Abner Womack, FAPRI, University of Missouri
- 10:45-11:15 World Cotton Market Outlook Dr. Sam Mohanty Texas Tech University
- 11:15-11:30 Break
- 11:30-12:15 U.S. and World Crops and Livestock Outlook Dr. Pat Westhoff FAPRI, University of Missouri

12:15-1:15 Lunch

1:15-2:00 "A View from the Hill-A Senate Staffer's
Take on Agricultural
Policy"

Dr. Stephanie Mercier, Minority Chief Economist, Senate Committee on Agriculture, Nutrition and Forestry

2:00-2:30 Representative Farm Outlook Dr. Joe Outlaw AFPC, Texas A&M

2:30-2:45 Concluding Remarks
Dr. Marvin Cepica,
Dean CASNR, TTU

University

Contact Person:

Dr. Sam Mohanty Assistant Professor,

Department of Agricultural and Applied Economics,

Fexas Tech University

Box 42132 Lubbock, TX 79409 Phone: 806-742-2821

Fax: 806-742-1099 sam.mohanty@ttu.edu

Appendix I

COTTON ECONOMICS RESEARCH UPDATE

January 2004 and July 2004 Issues



Director: <u>Dr. Don Eth</u>ridge

Associate Director: Dr. Sukant Misra

In this issue ...

New Projects

 Profitability Analysis of Cotton Production for Major Cotton Producing Regions of Texas

Recent Studies

Effects of MFA Quota Elimination: Declining U. S. Cotton Exports to Mexico?

Recent Activities

- ◆ Advisory Committee Meeting
- **♦** FAPRI Baseline
- ◆ Daily Price Estimation 2002/03
- ♦ Annual Report
- Chapingo University Professors Visit
- ◆ International Trade
- Research/Extension Symposium
- Bankers Agricultural Credit Conference
- Beltwide Cotton
 Conference
- Cotton Policy Analysis Presentation
- ◆ Latin American Conference

Vol. 8, No. 1
Cotton Economics
Research Institute
Department of
Agricultural and Applied
Economics
Texas Tech University

Cotton Economics Research Update

Cotton Economics Research Institute, Texas Tech University

January 2004

Welcome

Our Advisory Committee meeting in October was, as they have all been, very effective in guiding the overall Cotton Economics program. Several points that the Committee made, and on which we will be taking action, are: more collaboration with Cooperative Extension on dissemination of research findings, heightened visibility for Texas Tech, more research on the cottonseed segment of the industry, and some expansion of Advisory Committee membership beyond cotton, especially in the areas of water resources and the sorghum industry. On this last point, we may be, in effect expanding the overall perspective of the Advisory Committee to encompass all of the research in which the

Department of Agricultural and Applied Economics is involved.

Note elsewhere in this newsletter that the Cotton Economics Research Institute Research-Extension Symposium is scheduled for April, 2004. We had to cancel it last year because of Legislative travel restrictions but are looking forward to resuming this important collaborative activity. Note also that the group has been quite busy with a range of research-related activities. Please contact us if you have questions or need any additional information.

Don Ethridge, Director

New Projects

Profitability Analysis of Cotton Production for Major Cotton Producing Regions of Texas

In order for cotton producers to make informed production, financial, and marketing decisions, accurate farm level cost of production information is required. Cotton profitability and cost of production information has been developed since 1995 using the Standardized Performance Analysis-

Multiple Enterprise (SPA-ME) program. In addition, the Financial and Risk Management Assistance program (FARM Assistance) provides producers with a tool for long-term strategic planning and decision making under risk. While these programs, operated by Texas Tech and Texas A&M, have different objectives, there is considerable overlap in the types of information collected from producers.

This project will integrate these analytical approaches so as to provide more complete short-term and long-term management and planning information for managers. For more information, contact Phillip Johnson.

Recent Studies

Effects of MFA Quota Elimination: Declining U. S. Cotton Exports to Mexico?

Accounting for about 25% of U.S. total cotton exports, Mexico's importance for the U.S. cotton industry has considerably increased in recent years. Cotton consumption in Mexico has been rapidly increasing through the expansion of the textile/ clothing industry. As a consequence, Mexico's net imports have significantly grown since the early 1990's, and particularly with NAFTA. Approximately 95% of Mexico's total apparel export value goes to the United States, and about 44% of total Mexican textile and apparel production is exported to the United States. Consequently, cotton fiber consumption in Mexico is highly influenced by changes in U.S. textile and apparel prices. The model developed in this research allows us to simulate the implications of the 2005 US clothing/textile quota eliminations on Mexico's cotton consumption and net imports. Subsequently, some implications are drawn regarding U.S. cotton exports to Mexico. Depending on the scenarios expected in the US, the model shows that by 2005 (ATC final quota elimination), Mexico's net imports of cotton from the US would decline by 9 to 12% as compared to their "baseline" value. For additional information, contact Jaime Malaga.

Recent Activities

Advisory Committee Meeting

The Cotton Economics Research Advisory Committee (Ed Smith, Chuck Thompson, Bill Norman, Jaroy Moore, Ross Barber, Leslie Meyer, Steve Verett, and Lynn Scherler) met on October 3, 2003. Principal Investigators gave oral reports on projects, and the committee met with students working on Cotton Economics projects. Interim Dean Marvin Cepica met with the committee. The committee closed with their remarks and recommendations for the CER program.

Cotton Policy Analysis Presentation

Sam Mohanty was invited to do a presentation on the Cotton Policy Analysis work at Texas Tech University at the Food and Agriculture Organization of the United Nations in the Summer of 2003.

Daily Price Estimation 2002/03 Report is Out

The annual summary of the DPES for the 2002/03 Texas/Oklahoma Cotton Marketing year has been published. You can obtain a copy from the Institute or access it on the CER web site.

Annual Report of Cotton Economics Research Activities 2002/03

The department has produced a 2002/03 annual report of research activities and accomplishments 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/cerinstitute.htm.

International Trade

Jaime Malaga participated in the annual meeting of the S-1016 Regional Research Committee-Impacts of Trade and Domestic Policies on the Competitiveness and Performance of Southern Agriculture. The meeting was held in Washington D.C. in November of 2003 and also included sessions at ERS-USDA.

Chapingo University Professors Visit

Drs. Manuel Gomez and Rita Rindermann visited the Agricultural and Applied Economics Department in November to discuss a potential collaboration agreeement with Texas Tech University. The agreement includes the areas of teaching, research and faculty and student exchange. The Mexican visitors also presented a seminar on "Mexican Agricultural Policies under President Fox's Administration"

FAPRI Baseline

Suwen Pan and Mohamadou Fadiga traveled to Washington D.C. on December 16-18, 2003. They attended the FAPRI annual baseline review conference and presesnted the cotton baseline projection. The FAPRI conference is attended by leading crop analysts around the country and is beneficial in gathering information on supply and demand situations of world cotton.

Latin American Conference

Jaime Malaga was invited as a panelist at the Latin American Conference on Agricultural Trade in Mexico City in August. He was the only participant invited from a U.S. university.

Bankers Agricultural Credit Conference

The 31st Annual Bankers Agricultural Credit Conference was held November 14, 2003. Ms. Karen Neeley, General Council, Independant Bankers Association of Texas, gave the Legal and Regulatory Update. Lonnie Winters, Plains Cotton Cooperative Association, gave the Cotton Outlook presentation for 2004. The conference is a service of the Thorton Agricultural Finance Institute; Texas Tech University. For more information, contact Phillip Johnson.

Upcoming Activities

Agricultural Outlook Conference

The Cotton Economics Research Institute will be organizing an Agricultural Outlook Conference in Lubbock. The conference will be held during the first two weeks of May 2004. If you are interested in attending or would like additioal information, contact Samarendu Mohanty.

Third Annual Research/Extension Symposium on Cotton Economics Issues Scheduled for April 2004

The Cotton Economics Research Institute will be sponsoring the fourth annual research/extension symposium in April, 2004, in collaboration with the Texas Agricultural Extension Service. The motivation behind this symposium is to (1) deliver important researchresults 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.

Beltwide Cotton Conference Activities

Ten faculty and students from the Agricultural & Applied Economics department attended the National Cotton Council's Beltwide Cotton Conferences in San Antonio, TX held January 8-9, 2004.

Papers and Posters authors were:

Mohamadou Fadiga and Sukant Misra. "Consumer Purchase Decisions and Demand for Apparel: Implications for the U.S. Apparel Industry."

Mark Welch and Conrad Lyford. "Cost Competition for U.S. Textiles: Will Yarn Follow the Needle?"

Conrad Lyford, SangNyeol Jung and Don Ethridge. "The Price Quality at the Mill Level."

Eduardo Segarra. "Economic vs. Biological Goals in Technology Adoption."

Vernon Lansford and Eduardo Segarra. "The Dollars and Cents of Subsurface Drip Irrigation (SDI) for Cotton in the Southern High Plains of Texas."

Jeff Johnson, Phillip Johnson, Eduardo Segarra, and David Willis. "Water Conservation Policy Alternatives for the Texas Southern High Plains."

Dane Sanders, Sukant Misra, and Don Ethridge. "An Estimated 2003 Texas-Oklahoma Pre-season Price Schedule Based on Market History."

Naveen Musunuru and Eduardo Segarra. "Potential Economic Benefits of Adjusting Cotton Dryland Practices on Seasonal Rainfall Expectations."

Mohamadou Fadiga. "Structural Time Series Analysis of U.S. Cotton Exports."

Jaime Malaga and David Willis. "The Future of U.S. Cotton Exports: Prospects and Uncertainties."

Jose Enrique Lopez and Jaime Malaga. "Effects of MFA Quota Elimination: Declining U. S. Cotton Exports to Mexico?"

Dane Sanders, Sukant Misra, and Don Ethridge. "Texas-Oklahoma Producer Cotton Market Summary: 2002/03."

Ginger Sides and Phillip Johnson. "Business and Financial Risk of Cotton Producers in the Texas High Plains."

Ligia Vado, David Willis and Samarendu Mohanty. "Future Potential of Brazilian Cotton Exports."

Ginger Sides and Phillip Johnson. "Profitability of Cotton Production in the Texas High Plains From 1996-2002."

Contact Information: Cotton Economics Research Institute, Texas Tech University

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/cerinstitute.htm.

The e-mail address for the Institute is:

cer@ttu.edu.

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

Box 42132 Lubbock, TX 79409-2132 (806) 742-2821

Individual researchers can be reached as followed:

Emmett Elam

742-0277 ext.243; Emmett.Elam@ttu.edu Don Ethridge

742-2821 ext.225; Don.Ethridge@ttu.edu

Mohamadou Fadiga

742-0277 ext. 229; mohamadou.fadiga@ttu.edu Yufei Jin

742-1921ext. 245; yufei.jin@ttu.edu Jeff Johnson

> 742-2852; jeff.johnson@ttu.edu Phillip Johnson

742-0277 ext.237; Phil.Johnson@ttu.edu

Tom Knight

742-0277 ext.255; **Tom.Knight@ttu.edu**

Vernon Lansford

742-0277 ext.235; Vernon.Lansford@ttu.edu

Conrad Lyford

742-1921 ext.236; Conrad.Lyford@ttu.edu Jaime Malaga

742-0261 ext.241; Jaime.Malaga@ttu.edu Sukant Misra

742-2808; Sukant.Misra@ttu.edu

Samarendu Mohanty

742-0277 ext.240; sam.mohanty@ttu.edu Suwen Pan

742-0261 ext.233; S.Pan@ttu.edu

Roderick Rejesus

742-2024 ext.253; Roderick.Rejesus@ttu.edu Eduardo Segarra

742-0277 ext.242; Eduardo.Segarra@ttu.edu David Willis

742-0277 ext.238; David.Willis@ttu.edu

Texas Tech University
Department of Agricultural and Applied Economics
Box 42132
Lubbock, TX 79409-2132
0140-44-5745





Director: Dr. Don Ethridge Associate Director: Dr. Sukant Misra

In this issue...

New Projects

- An Evaluation of High-Value Market ing Pools for the Texas Cotton Industry
- Profitablity
 Analysis of Cotton
 Production for the
 High Plains
 Region of Texas

Recent Studies

- Texas/Oklahoma
 Producer Cotton
 Market Summary for
 2003/04
- ♦ Textile Mill Prices
- ♦ The Impacts of U.S.
 Cotton Programs on
 the World Market:
 An Analysis of
 Brazilian and West
 and Central African
 WTO Petitions

Activities

- ♦ Advisory Committee
 Meeting
- Texas Association of Agricultural Cooperatives Presentations
- **♦** CER Fact Sheets
- ChapingoUniversity, Mexico
- ♦ Graduate Student Awarded Outstanding Thesis
- ♦ EFS Presentation
- Research/Extension Symposium

Vol. 8, No. 2
Cotton Economics
Research Institute
Department of
Agricultural and Applied
Economics
Texas Tech University

Cotton Economics Research Update

Department of Agricultural and Applied Economics, Texas Tech University



July 2004

Cotton Economics Research Institute

Welcome

Researchers associated with the Institute continue to generate important, relevant, and useful results and approaches for Texas and U.S. Cotton, and the collaborative working relationships we have with sister groups in universities, government, and industry have been a substantial part of that success. The value of the research has been recognized by industry and policy making groups as well as academicians,

which supports our contention that good applied research must simultaneously be relevant and scientifically rigorous.

Note the new projects, recent results, and the diverse set of activities outlined here and the breadth and depth it represents. If you have any comments or suggestions please contact us

Don Ethridge, Director

New Projects

An Evaluation of High-Value Marketing Pools for the Texas Cotton Industry

The reputation of West Texas cotton is a "coarse count" raw material, suitable primarily for bottom-weight textiles that are not subjected to sophisticated dyeing and finishing; it is sometimes referred to as "denim cotton." However, new varieties with competitive yields and improved fiber properties have been planted on larger shares of the cotton acreage in West Texas. This presents an opportunity for premium-price marketing.

This project will evaluate the potential and establish the necessary conditions for a high-value marketing pool in West Texas. Three component objectives are to (1) evaluate the production potential and marketing positioning of high-value West Texas cotton varieties, (2) investigate high-value marketing

approaches for higher returns for cotton producers, and (3) develop prescriptions for developing high-value marketing pools in West Texas.

This work is supported by USDA through the International Cotton Research Center. For more information contact Conrad Lyford.

Profitability Analysis of Cotton Production for the High Plains Region of Texas

This project continues the Standardized Performance Analysis (SPA) of cotton production which has generated cost of production and profitability information for the Texas High Plains since 1995. Participating cotton producers are provided with detailed evaluations of their production costs and financial performance to assist in making informed production, finan-

New Projects (cont.)

cial, and marketing decisions. A data base of standardized production and financial information resulting from SPA has been compiled to help researchers and extension personnel identify characteristics of farming operations that will be useful for a wide range of applications, ranging from evaluations of financial viability, impacts of insect control measures, and assessment of the risk environment faced by producers in the Texas cotton industry.

This research is supported by USDA through the International Cotton Research Center. For more information, contact Phil Johnson.

Recent Studies

Texas/Oklahoma Producer Cotton Market Summary for 2003/04 Available

The annual report of producer prices and quality premiums and discounts based on Texas Tech's Daily Price Estimation System is now available for the 2003 crop (2003/04 marketing year). Results show generally higher prices (63.63 ϕ /lb. average), higher quality, lower leaf grade premiums, lower short staple discounts, and higher micronaire discounts than the previous year.

The report can be obtained from the website, www.aeco.ttu.edu/CER-Institute/index.htm, under the research reports section.

This research is supported by Cotton Incorporated, Texas State Support Committee. For more information, contact Sukant Misra or Don Ethridge.

Textile Mill Prices

A study of textile manufacturers' premiums and discounts paid for cottons from different U.S. production regions using price data from textile mills shows that there are substantial discrepancies between the values of the quality attributes of cotton expressed by the values in the Loan Rate Schedule and the values reported by USDA. Further, these differences vary by region and crop year. One of the resulting problems is that correct price signals are not being conveyed through the market channel, causing production

Recent Studies (cont.)

and market inefficiencies to occur.

This research was supported by Cotton Incorporated. For more information, contact Conrad Lyford.

The Impacts of U.S. Cotton Programs on the World Market: An Analysis of Brazilian WTO Petitions

This study analyzed the effects of elimination of U.S. cotton subsidy programs on the world cotton market using Texas Tech's Global Fiber Model. Removal of U.S. programs would increase world cotton prices by around 2 percent in the initial years. However, the impacts die out after a few years following program elimination as the major cotton producing and exporting countries expand their production. Overall, the results indicate that U.S. cotton production and exports would decline by an average of 4% and 5%, respectively. At the same time, Brazil and Australia, would expand their cotton acreage and increase exports by about 2%, and 1%, respectively. Unlike Brazil and Australia, Africa is unlikely to take advantage of the reduction in U.S. cotton exports, with less than 1% increase in their exports.

This research was supported by USDA. For more information, contact Sam Mohanty.

Activities

Advisory Committee Meeting

The Cotton Economics Research Advisory Committee is being altered somewhat. On recommendation of the Committee Members from last Fall's meeting, the focus of the committee is being broadened and it is becoming an overall Departmental Research Advisory Committee. Two new (additional) members have agreed to serve 3-year terms: Mr. Jim Conkwright, Manager, High Plains Underground Water Conservation District, and Mr. Tim Snyder, Marketing Director, National Grain Sorghum Producers Association, are the new members for 2004/05

Activities (cont.)

CER Fact Sheets

The following fact sheets have been written to provide information to the public about recent projects being conducted through the Cotton Economics Research Institute. For more information contact Sukant Misra or Don Ethridge, or go to our website at http://www.aeco.ttu.edu/cerinstitute.htm, then go to "Research Reports."

- 1) Web-Based Cotton Production Cost Calculator
- 2) U.S. Textile Manufacturers' Pricing of Cotton Quality Attributes
- 3) Structural Models of the U.S. and the Rest-of -the World Natural Fibers Market
- 4) Texas/Oklahoma Producer Cotton Market Summary for 2003/04

Chapingo University, Mexico

Sam Mohanty taught a short course on International Agricultural Policy on May 17-21. Mohanty was also there to maintain contacts with Mexican researchers that will help continue US- Mexico joint studies on trade and policy issues.

Graduate Student AwardedOutstanding Thesis

Enrique Lopez was awarded Outstanding M.S. thesis by the Western Agricultural Economics Association. The title of his thesis is "An Econometric and Simulation Model of the Mexican Cotton Industry." Dr. Jaime Malaga was Enrique's graduate advisor

Texas Agricultural Cooperatives Council Presentations

Drs. Jaime Malaga and Phillip Johnson made presentations at the Texas Agricultural Cooperatives Council Managers Conference in Ruidoso, NM, July 14 and 15. Dr. Malaga presented information on trade with Mexico, including cotton and textile trade. Dr. Johnson made a presentation on Texas water issues.

Research/Extension Symposium

The Cotton Economics Research Institute at Texas Tech University held the fourth annual Research/Extension Symposium on March 31, 2004. The motivation behind this symposium is to (1) deliver important research results directly to selected agricultural extension personnel for further dissemination to the cotton industry and (2) provide an opportunity to extension colleagues to evaluate the relevancy of research activities and help shape the future research focus of the Cotton Economics Research program.

The program was sponsored by the CER Institute, The College of Agricultural Sciences and Natural Resources of Texas Tech and by Cotton Incorporated. For more information contact Sukant Misra or Don Ethridge.

2nd Annual Agricultural Outlook Conference

The Cotton Economics Research Institute held its annual Commodity Outlook Conference on May 14, 2004. Dr. Stephanie Mercier, Minority Chief Economist, Senate Committee on Agriculture, Nutrition, and Forestry, was the featured speaker with a presentation titled "A View from the Hill--A Senate Staffer's Take on Agricultural Policy." Other speakers included Tim Snyder, National Grain Sorghum Producers, Drs. Pat Westhoff, FAPRI (University of Missouri), Joe Outlaw, AFPC (Texas A&M University) and Sam Mohanty, CERI (Texas Tech University). For more information contact Sam Mohanty or visit the Cotton Policy Analysis website at www.aeco.ttu.edu/CER-Insitute/policy/index.htm.

EFS Presentation

Conrad Lyford presented "Mill Prices for Quality: Are the Signals Getting Through?" at Cotton Incorporated's Engineered Fiber Selection System Conference in Greenville, S.C., June 7-9.



Contact Information

Web Site and E-Mail Address

The Cotton Economics Research Institute 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/cerinstitute.htm.

Individual researchers can be reached as followed:

Emmett Elam

742-0277 ext.243; Emmett.Elam@ttu.edu **Don Ethridge**

742-2821 ext.225; Don.Ethridge@ttu.edu

Mohamadou Fadiga

742-0277ext.229; mohamadou.fadiga@ttu.edu

Jeff Johnson

742-2852, jeff.johnson@ttu.edu

Phillip Johnson

742-0277 ext.237; Phil.Johnson@ttu.edu

Tom Knight

742-0277 ext.255; **Tom.Knight@ttu.edu**

Vernon Lansford

742-0277 ext.235; Vernon.Lansford@ttu.edu

The e-mail address for the Institute is:

cer@ttu.edu.

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

Box 42132

Lubbock, TX 79409-2132

(806) 742-2821

FAX (806) 742-1099

Conrad Lyford

742-1921 ext.236; Conrad.Lyford@ttu.edu

Jaime Malaga

742-0261 ext.241; Jaime.Malaga@ttu.edu

Sukant Misra

742-2808; Sukant.Misra@ttu.edu

Samarendu Mohanty

742-0277 ext.240; Sam.Mohanty@ttu.edu

Suwen Pan

742-0261 ext.233; S.Pan@ttu.edu

Roderick Rejesus

742-2024 ext.253; Roderick.Rejesus@ttu.edu

Eduardo Segarra

742-0277 ext.242; Eduardo.Segarra@ttu.edu

David Willis

742-0277 ext.238; David.Willis@ttu.edu

Texas Tech University Department of Agricultural and Applied Economics Box 42132 Lubbock, TX 79409-2132 0140-44-5745



Appendix J

COTTON ECONOMICS RESEARCH FACT SHEETS

2003/04



Cotton Economics Research Institute Texas Tech University

July 2004

Producer Incentives Don't Equal Mill Quality Incentives

The purpose of this project is to provide information on quality preferences by mill buyers and how much they pay for quality. This project has collected data from mills that represents 45% of the mill volume in the U.S. and developed an economic model to evaluate mill buyers preferences for quality. Quality attributes being evaluated for their effects on prices (premia/discounts) include color, fiber length, strength, micronaire, length uniformity, and foreign matter content. The purpose of this is to provide important market intelligence and information on quality preferences to producers.

Recently, incentives for quality were compared between those available at the producer level and those paid by mills. That is, mill prices were compared with prices at the producer level (i.e. the loan rate and Agricultural Marketing Service (AMS) price quotations). Producer incentives were found to (a) often not be closely aligned to mill incentives and (b) were relatively inflexible. This means that producers are often getting the wrong signals on quality, and this likely decreases producer profitability.

For More Information:

Contact Dr. Conrad Lyford at: (806) 742-7921 ext. 236 or at conrad.Lyford@ttu.edu

Sponsor:

Cotton Incorporated

Dr. Don Ethridge, Director

Dr. Sukant Misra, Associate Director Cotton Economics Research Institute
Departrment of Agricultural and Applied Economics
Texas Tech University
Box 42132 Lubbock, TX 79409

phone: 806-742-2821 fax: 806-742-1099

lax. 606-742-1098



Cotton Economics Research Institute Texas Tech University

July 2004

Structural Models of the U.S. and the Rest-of-the-World Natural Fibers Market

The policy analysis group of the Cotton Economics Research Institute has developed the world fiber model to conduct medium-term market outlook and policy analysis. The model is also used to respond to Congressional requests for information, analysis and advice on the expected behavior/response of the natural fiber markets.

In the last few months, we have analyzed variety of issues affecting cotton and textile markets. Our study of the Brazilian WTO petition on U.S. cotton subsidies found that removal of U.S. cotton programs would increase world price by around 2 cents per pound in the initial years. However, the impacts die out after few years of program elimination as the major cotton producing and exporting countries expand their production. Similarly, another study on Brazil examined the potential of cotton acreage expansion in the Cerrado Savannah. The study found that cotton is the least preferred crop as the land expands in the new region. However, cotton acreage in the region is likely to expand if cotton price is high relative to corn and rice. We are also in the process of completing various other studies including the impacts of the Multi-Fiber Arrangement (MFA) elimination and Chinese currency appreciation on the world fiber market. For more information, visit us online at http://www.ceri.ttu.edu/policy.

For More Information:

Contact Dr. Sam Mohanty at: (806) 742-2023 ext. 240 or at sam.mohanty@ttu.edu

Sponsor:

USDA

Dr. Don Ethridge, Director

Dr. Sukant Misra, Associate Director Cotton Economics Research Institute
Departrment of Agricultural and Applied Economics
Texas Tech University
Box 42132 Lubbock, TX 79409

phone: 806-742-2821 fax: 806-742-1099



Cotton Economics Research Institute Texas Tech University

August 2004

Web-Based Cotton Production Cost Calculator

Develop a standardized performance analysis method to evaluate enterprise profitability and cost of production for cotton that will be web-based to allow cotton producers to evaluate past crop year production costs or use as a planning tool.

Knowledge of the true costs of production is required for cotton producers to make sound production, financial, and marketing decisions. An information based management tool that can be used in conjunction with their present record system would assist producers in calculating their true production costs. The objective of this study was to develop a web-based production cost calculator, which would aid producers in evaluating enterprise cost and returns by using income statement financial information in addition to enterprise production information. The allocation of income and cost items from the income statement to enterprises and sub-enterprises through the use of specified allocation methods would facilitate the calculation of a true cost of production and enterprise profitability. The production cost calculator allows producers to calculate the profitability of specific enterprises within their farming operations and the breakeven price necessary to recover total and cash production costs, and breakeven yield. The calculator is useful as a planning toolor can be used to assess prior year's cost of production.

A web-based production cost calculator was developed based on the Standardized Performance Analysis (SPA) method and is available online at: http://www.aeco.ttu.edu/CER-Institute/Resourcepage.htm

For More Information:

Contact Dr. Phillip Johnson at: (806) 742-0231 ext. 237 or at phil.johnson@ttu.edu

Sponsor:

Cotton Incorporated

Dr. Don Ethridge, Director

Dr. Sukant Misra, Associate Director Cotton Economics Research Institute
Departrment of Agricultural and Applied Economics
Texas Tech University
Box 42132 Lubbock, TX 79409

ox 42132 Lubbock, 17, 79409 phone: 806-742-2821

fax: 806-742-1099



Cotton Economics Research Institute Texas Tech University

August 2004

The 2003/04 Cotton Market for Texas Farmers

The Cotton Economics Research Institute developed the Daily Price Estimation System (DPES) for daily price analysis and reporting for the Texas/Oklahoma cotton market. Based on its results, analysis of the 2003/04 marketing year shows that prices increased and were at their highest level in the last four years, averaging 63.68 cents per pound. Total bales and total sales for the West Texas region declined from 2002/03. Although total sales for the East Texas/Oklahoma region remained unchanged, total bales for the region increased to 90,620 bales, about 15 percent higher than its 2002/03 level. The higher prices were influenced by an increased level of overall quality in addition to supply and demand factors. For the 2003/04 marketing year, the results indicated lower premiums for low leaf grade and uniformity and higher premiums for higher staple length, color grade, and higher level of strength. However, premium levels for better than base quality strength and the first digit color grade appear to be minimal. Price discounts in 2003/04 for staple length, first and second digit of the color grade, strength, and uniformity either remained unchanged or decreased, while discounts for leaf, micronaire, and bark increased compared to 2002/03 levels. This research is supported by the Texas State Support Committee and Cotton Incorporated.

For More Information:

Contact Dr. Sukant Misra at: (806) 742-2017 ext. 246 or at sukant.misra@ttu.edu or Dr. Don Ethridge at (806)742-2821 or don.ethridge@ttu.edu

Sponsor:

Cotton Incorporated
Texas State Support Committee

Dr. Don Ethridge, Director

Dr. Sukant Misra, Associate Director Cotton Economics Research Institute
Departrment of Agricultural and Applied Economics
Texas Tech University
Box 42132 Lubbock, TX 79409

phone: 806-742-2821 fax: 806-742-1099

Appendix K

THORNTON INSTITUTE ACTIVITIES

- (1) 31ST ANNUAL BANKERS AGRICULTURAL CREDIT CONFERENCE November 14, 2003
- (2) 2003 BANKERS AGRICULTURAL CREDIT CONFERENCE OFFICERS AND DIRECTORS
 - (3) 2003 TEXAS AGRICULTURAL LENDING SCHOOL October 1-3, 2003
 - (4) 2003 TEXAS AGRICULTURAL LENDING SCHOOL ADVISORY AND PLANNING COMMITTEE

31st ANNUAL BANKERS AGRICULTURAL CREDIT CONFERENCE

NOVEMBER 14, 2003

INTERNATIONAL CULTURAL CENTER TEXAS TECH UNIVERSITY LUBBOCK, TEXAS

PR	$\mathbf{\Omega}$	GR	Δ	1	1
1 1/		/IT/	Н	UΝ	ν.

7:30 a.m. - 8:30 a.m. Registration

8:00 a.m. - 8:15 a.m. General Session

Presiding: Mr. Stan Gill, President Bankers Agricultural Credit Conference

Senior Vice President

PNB Financial Lubbock, Texas

8:15 a.m. – 9:30 a.m. Legal and Regulatory Update

Ms. Karen Neeley General Counsel

Independent Bankers Association of Texas

Austin, Texas

9:30 a.m. - 9:50 a.m. Break

9:50 a.m. – 11:20 a.m. War & Peace: Avoiding the Legal Landmines?

Mr. John Huffaker

Sprouse Shrader Smith P.C.

Amarillo, Texas

11:30 a.m. – 1:00 p.m. Lunch

1:00 p.m. – 2:00 p.m. Regional Rural Development

Mr. Stephen Kiser Regional Economist

FDIC

Dallas, Texas

2:00 p.m. – 3:00 p.m. Financial and General Economic Outlook

Dr. Scot Hein

Briscoe Chair of Bank Management and Professor

Texas Tech University

Lubbock, Texas

3:00 p.m. - 3:15 p.m. Break

3:15 p.m. - 3:45 p.m. Agricultural Outlook for 2004

Dr. Richard McDonald President & CEO

Texas Cattle Feeders Association

Amarillo, Texas

3:45 p.m. - 4:15 p.m. Mr. David Stanford

Vice President - Marketing Plains Cotton Cooperative Assn.

Lubbock, Texas

4:15 p.m. Adjourn

BANKERS AGRICULTURAL CREDIT CONFERENCE OFFICERS AND DIRECTORS 2003

President:

Mr. Stan Gill

Senior Vice President

PNB Financial

Lubbock

Vice President:

Mr. Jeff Rogers

Branch President

Security Bank of Ralls

Abernathy

Directors:

Mr. Jim Bob Reynolds

Vice President

First State Bank of Stratford

Dalhart

Mr. Kirk Thomas

Executive Vice President

State National Bank of West Texas

Lubbock

Mr. Boyd Finch

Vice President

American State Bank

Lubbock

Mr. Gary Patterson

Vice President

Muleshoe State Bank

Farwell

Mr. Kurt Coor

Vice President

The State National Bank

Big Spring

Coordinator:

Dr. Phillip Johnson

Associate Professor

Agricultural and Applied Economics

Texas Tech University

Lubbock

Sponsored By:

McCoy Myers and Associates

TIB-The Independent BankersBank

Texas Bankers Association

Independent Bankers Association of Texas

Thornton Agricultural Finance Institute

Organized By:

Agricultural and Applied Economics

Texas Tech University

TEXAS AGRICULTURAL LENDING SCHOOL OCTOBER 1 – 3, 2003

FOUR POINTS SHERATON HOTEL LUBBOCK, TEXAS

Wednesday, Oct. 1

1:15 pm	Welcome and Introductions Phillip Johnson and Danny Klinefelter
1:30	Water Rights and Groundwater Leasing Mr. Judon Fambrough Real Estate Research Center Texas A&M University
3:00	Break
3:30	Bio-Terrorism and Agricultural Lending Ms. Vickie Sutton Professor of Law Texas Tech University
5:00	Hospitality Hour
6:00	Dinner (informal – no speakers)

Thursday, Oct. 2

7:30 am	Continental Breakfast
8:30	Credit Risk Analysis in Agriculture - Big Picture Dr. Paul Ellinger Associate Professor University of Illinois
10:00	Break
10:30	Credit Risk Analysis in Agriculture – Smaller Picture
	Dr. Paul Ellinger Associate Professor University of Illinois

Thursday, Oct. 2 (Cont.)

Noon Lunch Provided

1:30 pm Financial Ratio Analysis in Lending

Dr. Ken Cyree

Assistant Professor – Finance

Texas Tech University

3:00 Break

3:30 Financial Ratio Analysis in Lending - Continued

5:00 Adjourn

Friday, Oct. 3

7:30 am Buffet Breakfast – informal roundtable discussions

8:30 Bankruptcy: What Creditors Need to Know

Mr. Walter O'Cheskey Bankruptcy Trustee

Lubbock, TX

10:00 Break

10:30 War & Peace: Avoiding the Legal Landmines?

Mr. John Huffaker

Sprouse Shrader Smith P.C.

Amarillo, TX

Noon Adjourn

TEXAS AGRICULTURAL LENDING SCHOOL

ADVISORY & PLANNING COMMITTEE

Mr. Mike Cowley Mr. Stan Gill

Vice President Senior Vice President First Victoria National Bank, Victoria PNB Financial, Lubbock

Mr. Ken Doran Mr. Mike Mauldin

Senior Vice President President

Texas AgFinance, Robstown Hereford State Bank, Hereford

Mr. Ben Novosad Mr. Scotty Elston

Chief Credit Officer

Ag Texas, Lubbock Capital Farm Credit, Bryan

Mr. Doug Thiessen Vice President

First Ag Credit, Lubbock

COORDINATORS

Dr. Phillip Johnson Dr. Danny Klinefelter Professor & Extension Economist Associate Professor Agricultural and Applied Economics Texas A&M University

College Station

Texas Tech University Lubbock