

**PROCEEDINGS OF THE 2001
COTTON RESEARCH MEETING**

AND

**SUMMARIES OF COTTON
RESEARCH IN PROGRESS**

Edited by Derrick M. Oosterhuis

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PREFACE

The 2000 cotton season proved to be another difficult and disappointing season. The average state yield in 2000 was 733 lb lint/acre and that was above the five-year average of 724 lb lint/acre. The greatest disappointment was the low price received, averaging \$0.568 per pound for the 2000 cotton crop. The lower than expected yields were mainly caused by hot, dry weather during the boll development period (Fig. 1). The crop provided 1,470,000 bales from 950,000 acres statewide. Fiber quality of Arkansas cotton was generally good with an average staple of 34.6, strength of 27.3 g/tex and micronaire of 4.5. A large portion of the bales classed had a color designation of 31 or better (48.5%), while an additional 35.5% was classed at 41. About 13.7% of the bales classed had light spot grades.

The continuing large shift to the use of transgenic cultivars in Arkansas was very noticeable. The percentage of Arkansas cotton acreage planted with transgenic cotton in 2000 was 88%, compared with 66% in 1999 and 45% in 1998. This is astonishing considering that Bt cotton was first introduced commercially in Arkansas in 1996. In 2000, the breakdown of transgenic cotton was: Bt 24%, RR 6%, BR(stacked) 36%, and BXN 22%.

Arkansas growers had the highest losses due to insects in the mid-south in terms of loss plus control-cost per acre at \$158.46/acre (including boll weevil eradication cost). The bollworm/budworm complex was the number one state pest problem, followed by boll weevils, and then by early-season thrips. Boll weevils infected most of the cotton acreage (costing \$18.73/acre to control). The Boll Weevil Eradication Program is now in full swing. In 2001, eradication in the Southwest Zone will be in the final year and the Southeast, Central and Ridge Zones will be in their third, second, and first years, respectively. The Northeast Zone has yet to pass an eradication referendum.

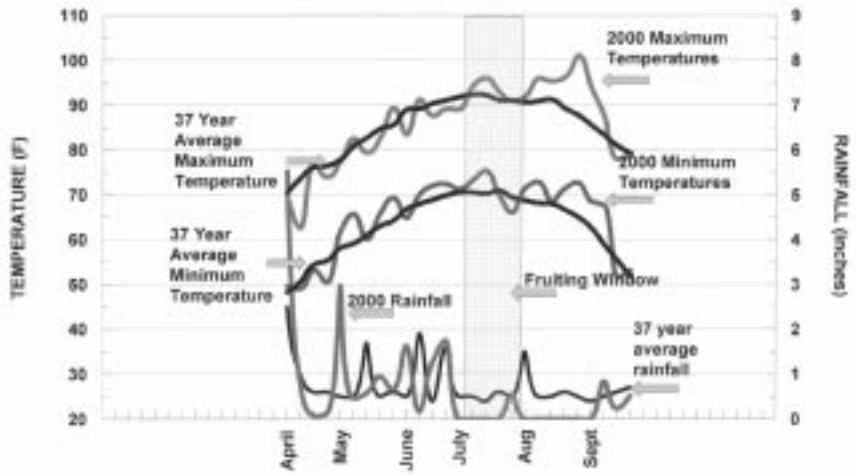


Fig. 1. Weekly maximum and minimum temperatures and rainfall for 2000 compared with 37-year averages at Rohwer, southeast Arkansas.

ARKANSAS COTTON RESEARCH GROUP

2000/2001

The University of Arkansas Cotton Group is composed of a steering committee and three sub-committees representing production, genetics and pest management. The group contains the appropriate representatives in all the major disciplines as well as representatives from the Cooperative Extension Service, the Farm Bureau, the Agricultural Council of Arkansas, and the State Cotton Support Committee.

The objective of the Arkansas Cotton Group is to coordinate efforts to improve cotton production and keep Arkansas producers abreast of all new developments in research.

Steering Committee: Fred Bourland, Gus Lorenz, Gene Martin, Keith Martin, Robert McGinnis, Derrick Oosterhuis (Chm.), Don Plunkett, Bill Robertson, Craig Rothrock, Mac Stewart, Cecil Williams, David Wildy, Jerry Williams

Pest Management: Gary Felton, Jeremy Green, Don Johnson, Terry Kirkpatrick, Tim Kring, Gus Lorenz, Bill Robertson, Craig Rothrock (Chm.), Ken Smith, Don Steinkraus, Glen Studebaker, Tina Teague, Chris Tingle, Phil Tugwell, Seth Young

Production: Bill Baker, Ray Benson, Mark Cochran, Dennis Gardisser, Terry Keisling, Gus Lorenz, Scott McConnell, Derrick Oosterhuis (Chm.), Lucas Parsch, Don Plunkett, Bill Robertson, Phil Tacker, Chris Tingle, Earl Vories

Genetics: Fred Bourland, Hal Lewis, Bill Robertson, Mac Stewart (Chm.)

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The 2001 Arkansas Cotton Research meeting was held in conjunction with the Arkansas Crop Consultants meeting, and we would like to express our appreciation to all those individuals who helped with the arrangements, particularly Gus Lorenz and Bill Robertson. In addition we thank the organizations that allowed us to share in their meeting; the Arkansas Crop Consultants Association, Arkansas Crop Protection Association, Arkansas Plant Food Association, Arkansas Certified Crop Advisor, University of Arkansas Division of Agriculture and Arkansas State University. We also extend our gratitude to Marci Milus for help in typing this special Report and getting it ready for publication.



COTTON INCORPORATED AND THE ARKANSAS STATE SUPPORT COMMITTEE

The 2000 Proceedings of the Arkansas Cotton Research Meeting has been published with funds supplied by the Arkansas State Support Committee of Cotton Incorporated.

The principal purpose of Cotton Incorporated is to increase the profitability of cotton production by building demand for U.S. cotton. The Arkansas State Support Committee of Cotton Incorporated is a board whose voting members are cotton growers from Arkansas. Advisory members include representatives of Arkansas' certified producer organizations, the University of Arkansas, the Cotton Board, and Cotton Incorporated. Five percent of Cotton Incorporated's total budget is allocated for research and promotional activities, as determined by the State Support Committees of the cotton producing states. The sum allotted to Arkansas' State Support Committee is proportional to Arkansas' contribution to the total U.S. cotton fiber production and value in the five years previous to the budget.

The Cotton Research and Promotion Act is a federal marketing law. The objective of the act is to develop a program for building demand and markets for U.S. cotton. The Cotton Board, based in Memphis, Tennessee, was created to administer the act and is empowered to contract with an organization with the capacity to develop such a program. Cotton Incorporated, with its main offices in New York, New York, the center of the U.S. clothing merchandising industry, and its research offices in Raleigh, North Carolina, the center of the U.S. textile industry, is the contracting agency. Cotton Incorporated also maintains offices in Osaka, Japan; Mexico City, Mexico; Shanghai, China; and Singapore, Malaysia to foster international sales. Both the Cotton Board and Cotton Incorporated are non-profit entities, with governing boards comprised of cotton growers and cotton importers. The budgets of both organizations are annually reviewed and approved by the U.S. Secretary of Agriculture.

Cotton production research is supported in Arkansas both by Cotton Incorporated directly from its national budget and by the Arkansas State Support Committee from its formula funds. Several of the projects described in these proceedings, including the publication of these proceedings, are supported wholly or in part by these means.

Arkansas Cotton State Support Committee / Cotton Incorporated Funding 2001.

Project	Principal Investigator	Amount Funded	
		2000	2001
Proceedings annual Arkansas research meeting	Oosterhuis	5,000	5,000
Cottonseed pool — Arkansas	Cotton Inc.	13,700	8,520
Support of boll weevil eradication in Arkansas	Alexander	10,000	--
Boll weevil eradication: implementation and evaluation	Yearian	85,656	--
Terminating squares after physiological cutout	Bourland	3,500	--
Control of reniform nematodes	Kirkpatrick	16,300	19,118
COTMAN: Economics	Cochran	16,000	--
Validation of COTMAN termination	Allen	10,000	--
Plant growth regulator evaluation	Oosterhuis	16,000	--
Breeding and evaluation of host plant resistance	Bourland	18,000	--
Control of spider mite	Steinkraus	13,700	--
Roundup Ready and Bt evaluation	Allen	15,000	--
Cotton graduate student award	Oosterhuis	500	500
Natural enemies	Kring	9,430	9,430
New Stress Index	Tugwell	10,000	10,000
Root Problem Handbook	Oosterhuis	2,000	--
New Petiole Sampling	Oosterhuis	6,370	6,370
Plant Bug Feeding	Allen	8,000	--
Plant Bug Feeding	Greene	--	8,000
Transgenic Evaluation	Tingle	--	15,000
Insecticide Termination	Greene	--	10,000
Bollworm/Budworm studies	Johnson	--	13,934
Carbohydrate partitioning and stress	Oosterhuis	--	18,650
Defoliation	Robertson	--	9,486
Fungicide decisions	Rothrock	--	13,946
Aphid Fungus	Steinkraus	--	15,927
New Irrigation	Vories	--	23,188
Herbicide systems	Savage	--	16,000
Mapping PGRs	Robertson	--	15,304
Sidedress Temik	Lorenz	--	11,990
Herbicide drift	Robertson	--	12,091
Smaller bracts	Bourland	--	15,227
Plant breeding: yield and quality	Bourland	--	25,935
Totals:		259,156	283,616

**PROCEEDINGS OF THE 2001
COTTON RESEARCH MEETING**

**Arkansas Cotton Research/Extension/Production
and Marketing Group
University of Arkansas**

Theme: Research for Efficient and Profitable Cotton Production

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DoubleTree Inn, Little Rock, Arkansas
January 5, 2001

