

**AN ESTIMATED 2003 TEXAS-OKLAHOMA PRE-SEASON
PRICE SCHEDULE BASED ON MARKET HISTORY**

Dane Sanders, Sukant Misra, and Don Ethridge

Cotton Economic Research Institute

Department of Agricultural and Applied Economics

College of Agricultural Sciences and Natural Resources

Texas Tech University

Lubbock, TX

Introduction

The Daily Price Estimation System (DPES) is a computerized, econometric price analysis system that is maintained and operated by Texas Tech University's Cotton Economics Research Institute, Department of Agricultural and Applied Economics. The DPES uses sales of cotton from electronic cotton markets to estimate and report prices and quality premiums and discounts for various quality combinations in West Texas and East Texas/Oklahoma producer markets. This system uses a set of computer programs and established statistical techniques to estimate cotton prices and quality premiums and discounts on a daily basis (Brown et al.; Brown and Ethridge).

Pre-Marketing Year Price Discovery

The Commodity Credit Corporation (CCC) loan program makes nonrecourse loans to producers based on a loan schedule that assigns loan levels for base quality with premiums and discounts for various quality deviations from that base. Over time, this loan schedule has come to be used for a variety of price determination purposes ranging from allocation of dividend payments of marketing associations to forward contract pricing. This schedule has also been used by the industry as a price discovery mechanism to determine cotton prices for the upcoming marketing year. As such, this demonstrates the importance to the industry of having a means of examining the price structure of the market before the season starts in order to facilitate a number of marketing functions.

DPES Pre-Season Price Schedule

Based on market history, the Cotton Economics Research Institute has developed a method of estimating a price schedule for the upcoming marketing year. This schedule is meant to serve as an additional pre-marketing year price discovery tool. This schedule is an extension of the work started by Carr and Ethridge in which the loan schedule used by the CCC was combined with DPES annual crop estimates (beginning in 1989) to create a price schedule, which had been adjusted for the coming year using actual market history.

Beginning in 1989, a weighted average of prices by number of bales per region (West Texas and East Texas/Oklahoma) was taken for the first seven months of each crop year. These average prices were then averaged with the 1989 CCC loan schedule to derive the adjusted 1990 DPES pre-season price schedule. The following year, the 1990 DPES price schedule was adjusted using a weighted average of prices for the first seven months of the 1990 crop year to derive the 1991 DPES pre-season price schedule. This method was used to adjust the DPES price schedule for each successive marketing year up to the current crop year (2002), which is presented in Table 1.

Although it is not possible to accurately forecast cotton prices or price movements for any forthcoming marketing year, the DPES pre-season price schedule does provide a means of examining prices, premiums and discounts based on actual market history. This pre-season price schedule may be used to provide buyers and sellers with an overall picture of the spot cotton market in Texas and Oklahoma.

Conclusion

Because of the importance of accurate price reporting to the cotton industry, participants in the marketplace should have access to a timely and reliable source of information that presents an accurate representation of the cotton market. Therefore, the DPES pre-season price schedule for Texas and Oklahoma is calculated each year and is distributed on a request basis to the cotton industry so as to provide additional price information to examine the market history of quality premiums and discounts. The pre-season price schedule is also posted on the Cotton Economics Research Institute web page (<http://www.aeco.ttu.edu/DPES/>).

Note

The authors acknowledge Plains Cotton Cooperative Association for cooperation in obtaining data, Phil Johnson and Mohamadou Fadiga for their comments and suggestions, and Cotton Incorporated and the Texas State Support Committee for funding support. Manuscript Number CER-03-11.

References

Brown, J.E. and D.E. Ethridge. "Functional Form Model Specification: An Application to Hedonic Pricing." *Ag. and Res. Econ. Review*, October 1995.

Brown, J.E., D.E. Ethridge, D. Hudson, and C. Engels. "An Automated Econometric Approach for Estimating and Reporting Daily Prices." *J. Agr. and Applied Econ.* 27:2(December 1995): 409-422.

Carr, C. and D.E. Ethridge. "Evaluation of CCC Loan Premiums and Discounts for the Texas and Oklahoma Cotton Market." Texas Tech University Department of Agricultural and Applied Economics Cotton Economics Research Publication No. CER-96-2.

Table 1. 2003 Pre-Season Price Schedule for Texas and Oklahoma

Color Grade and Staple Premiums and Discounts in Points/lb. ^a												
Staple Length												
		26 - 28	29	30	31	32	33	34	35	36	37+	
C o l o r		11	-798	-662	-521	-390	-265	-145	19	82	173	263
		21	-803	-667	-526	-396	-270	-151	22	85	167	257
		31	-808	-672	-545	-402	-276	-157	16	79	160	230
		41	-838	-704	-566	-437	-313	-195	Base	62	122	206
		51	-929	-799	-664	-538	-418	-304	-196	-95	-1	86
		61	-1128	-1007	-880	-774	-650	-543	-441	-347	-258	-178
		71	-1414	-1305	-1190	-1083	-981	-884	-792	-707	-628	-555
G r a d e		12	-909	-776	-640	-514	-393	-277	-168	-65	30	117
		22	-910	-777	-641	-515	-394	-278	-169	-66	29	116
		32	-933	-803	-680	-542	-422	-307	-199	-97	-3	65
		42	-980	-851	-718	-595	-476	-364	-257	-157	-64	20
		52	-1115	-993	-865	-747	-634	-525	-424	-328	-240	-158
		62	-1318	-1204	-1085	-986	-869	-769	-673	-584	-502	-426
		72	-1521	-1407	-1288	-1189	-1072	-975	-879	-792	-705	-628
Micronaire Differences		Leaf Grade Differences			Uniformity Differences			Strength Differences				
Mike Range	Disc.	Leaf Grades		Prem./ Disc.	Uniformity		Disc./ Prem.	Grams/Tex.		Disc./ Prem.		
< 24	-406			62	< 77		-29	18		--		
25 - 26	-344	1		47	78		-22	19		--		
27 - 29	-248	2		28	79		-15	20		-131		
30 - 32	-150	3		Base	80		-7	21		-106		
33 - 34	-91	4		-37	81		Base	22		-81		
35 - 49	Base	5		-81	82		7	23		-61		
50 - 52	-152	6		-132	83		15	24 - 25		-36		
> 53	-216	7			84		18	26		-12		
		Level 1	Level 2		85		15	27 - 28		Base		
Bark		-209	-201		86		18	29		3		
Preparation		-666	-782		> 86			30		5		
Other Ext. Matter		-556	-579					31		8		
								32		10		
								>32		10		

^a100 points = 1 cent