

**TEXAS-OKLAHOMA PRODUCER COTTON MARKET  
SUMMARY: 1996/97  
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**Abstract**

The Texas-Oklahoma producer cotton markets exhibited a much wider range of quality in 1996/97 than in previous years. Overall, quality was generally high throughout the season. The amount of cotton available on the spot market increased significantly over the previous year while average producer prices fell below those observed in the same period. Quality premiums and discounts were less variable than those for 1995/96. With the exception of strength, price discounts increased for all quality attributes compared to those for the 1995/96 season. Premiums for leaf content and strength both increased.

**Introduction**

The Daily Price Estimation System (DPES) is maintained and operated by the Department of Agricultural and Applied Economics, Texas Tech University. The DPES is a computerized, econometric price analysis system that evaluates the producer cash market prices and quality premiums and discounts for the West Texas and East Texas/Oklahoma marketing regions on a daily basis (Brown et al.; Brown and Ethridge). All results are based on the U.S. Department of Agriculture's official HVI grading standards with respect to staple length, color grade, micronaire, leaf grade, bark, other extraneous matter, and strength. The information presented here is a summary of results for the entire 1996/97 marketing year (1996 crop).

**1996/97 Statistics**

A total of 1,356,655 bales (1,252,303 from West Texas and 104,362 from East Texas/Oklahoma), and 20,956 sales transactions were used in DPES computations. Total volume increased by about 62% over that of the 1995/96 crop, partially because of a significant decrease in forward contracting. Overall, the DPES used an estimated 51.7% of total producers' cash market sales in 1996/97.

Table 1 provides the simple averages for the 1996/97 and 1995/96 marketing years. The 1996 crop cotton was generally of high quality. The quality of cotton was much more diverse than in previous years. This higher variability and the larger volume accounts for the decline in spot market prices.

Tables 2 and 3 consist of weighted average base prices and quality premiums and discounts for West Texas and East Texas-Oklahoma. The base price is shown at staple length 34 and color grade 41.

**Patterns of Sales Activity and Base Prices**

The 1996/97 marketing year covered a shorter time period (late October to early March) than the previous year. The volume of sales transactions in 1996/97 fluctuated widely throughout the season, with heavy trading occurring throughout late November, declining slightly, and increasing again after the beginning of 1997 (Figure 1).

The average price received by producers for 1996/97 was 63.48 cents/lb. (Table 1), down from the previous two years. Prices in 1996/97 exhibited greater variation than in previous years, and tended to move with a slight upward trend towards the end of the year. 1996/97 prices tended to fluctuate to a degree, but these fluctuations were not as large as those experienced in 1995/96 (Figure 2).

**Patterns of Premiums and Discounts**

When analyzing specific attributes, all other attributes are held at their base levels. In the explanations that follow, quality attribute premiums and discounts for West Texas are used; however, they are not appreciably different from those for East Texas-Oklahoma.

**Leaf Grade.** Both average premiums and discounts for leaf grade increased in 1996/97 over those of the 1995/96 marketing year (Figure 3); however premiums were not as variable as in 1995/96. As in the previous year, there were several days in which leaf grade did not affect the price.

**Color Grade.** Discounts for color were relatively stable throughout the 1996/97 season. The first digit of the color grade had slightly higher premiums between grades 2 and 4 than in 1995/96, but price differed little between grades 1 through 3 (Figure 4). The second digit of the color grade exhibited increased discounts over the previous year, with a large increase in the discount for grade 3 (Figure 5). This could be due to the large amount of cotton with second digit grades between 1 and 2.

**Staple.** Discounts and premiums for staple were relatively stable throughout most of the year with a slight downward trend over the course of the season. Premiums for 1996/97 decreased slightly while discounts increased over those of 1995/96 (Figure 6).

**Strength.** Discounts and premiums for strength were erratic throughout the 1996/97 season. Both premiums and discounts decreased over 1995/96 levels (Figure 7). There were several days in which strength did not affect price. This could be due to the substantial decrease in variation in strength, resulting in little price variation with respect to that quality.

**Micronaire.** Micronaire discounts in 1996/97 were much more stable than those seen in 1995/96. There was a slight upward trend in discounts throughout the season. Discounts for both low and high micronaires increased over those of previous years (Figure 8). These large discounts could be the result of a greater range of micronaire available on the 1996/97 market, encouraging greater differentiation in price.

**Level 1 Bark.** Discounts for level 1 bark in 1996/97 were substantially larger than in 1995/96 (Figure 9). Bark discounts remained high throughout most of the season, but dropped around the middle of February and remained at or below 200 points/lb. Reasons for this trend are not clear; however, the overall increase in bark discounts is likely due to the general increase in variability of 1996/97 quality.

### **Conclusions**

The 1996/97 crop was generally of high quality for Texas and Oklahoma, but was also more variable in quality than in previous years. Prices varied more in 1996/97, but did not reach the levels observed in the past two years. The volume of spot market sales transactions increased significantly over 1995/96 due to a decrease in forward contracting and a larger crop. Discounts increased for every quality except strength. Because of the diversity of the 1996 crop and the relative abundance of high quality cotton in the market, merchants were able to be more selective with respect to the differing qualities. In addition to this factor, the increase in sales volume and quality variability could account for the increase in discounts and the overall lower prices. It appears that producers, observing the decrease in prices, may have withheld their cotton from the market during the middle of the season in anticipation of rising prices. However, towards the end of the season, they may have realized that there would be little recovery in prices, and, as loans came due, sold the remaining cotton.

### **Acknowledgments**

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### **References**

Brown, J.E., and D.E. Ethridge. "Functional Form Model Specification: An Application to Hedonic Pricing." *Ag. and Res. Econ. Review* Oct., 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), Dec., 1995: 409-422.

Floeck, H., D. Hudson, and D. Ethridge. "Texas-Oklahoma Producer Market Summary: 1995/96." Texas Tech College of Agricultural Sciences and Natural Resources Publication, CER-96-4, October, 1996.

Table 1. Texas-Oklahoma Crop Statistics from the DPES, by Marketing Year.

Attribute	Average		95% Population Range <sup>a</sup>	
	1996/97	1995/96	1996/97	1995/96
Price (cents/lb.)	63.48	75.18	56.01 - 70.96	71.47 - 78.89
Bales per Sale	65	43	1 - 244	1 - 181
Leaf Grade	3.18	2.90	1.48 - 4.87	1.40 - 4.40
Color Grade (1)	2.62	2.41	1.34 - 3.91	1.29 - 3.53
Color Grade (2)	1.46	1.55	1 - 2.56	1 - 2.61
Staple	34.23	33.13	31.87 - 36.59	30.53 - 35.74
Strength	27.33	27.92	23.80 - 30.86	23.10 - 32.75
Micronaire	3.77	3.66	2.71 - 4.83	2.75 - 4.57
Level 1 Bark(%)	26.14	26.70	0 - 85.75	0 - 58.07
Level 2 Bark(%)	0.06	0.07	0 - 3.12	0 - 3.50
Level 1 Other(%)	0.87	1.17	0 - 12.64	0 - 15.18
Level 2 Other(%)	0.12	0.10	0 - 5.36	0 - 4.42

<sup>a</sup>The range within which 95% of the population will fall.

Table 2. 1996/97 DPES Weighted Average Price Estimates West Texas.

Dept. of Ag. and Appl. Economics, Texas Tech Univ. # Sales: 7444  
 Date: 1996 Crop Region: West Texas # Bales: 1252303  
 Color Grade and Staple Premiums and Discounts in Points/lb.

Color Grade	Staple Length										
	28	29	30	31	32	33	34	35	36	37	38
11	--	-484	-326	-188	-70	27	101	152	179	181	181
21	--	-484	-326	-188	-70	27	101	152	179	181	181
31	--	-489	-331	-193	-75	22	96	146	173	176	176
41	--	-576	-421	-284	-168	-73	64.77 <sup>a</sup>	50	76	79	79
51	--	-741	-591	-458	-345	-253	-182	-133	-108	-105	-105
61	--	-979	-835	-708	-599	-511	-443	-396	-372	-369	-369
71	--	--	--	--	--	--	--	--	--	--	--
12	--	-563	-408	-272	-155	-60	13	63	90	92	92
22	--	-563	-408	-272	-155	-60	13	63	90	92	92
32	--	-568	-413	-277	-160	-65	8	58	84	87	87
42	--	-654	-501	-367	-252	-158	-86	-37	-11	-9	-9
52	--	-818	-669	-539	-427	-336	-266	-218	-193	-190	-190
62	--	-1052	-910	-785	-678	-590	-523	-477	-453	-451	-451
23	--	-759	-609	-477	-364	-272	-201	-153	-127	-125	-125
33	--	-764	-614	-482	-369	-277	-206	-158	-132	-130	-130
43	--	-847	-699	-569	-458	-367	-298	-250	-225	-222	-222
53	--	-1005	-861	-735	-627	-539	-471	-425	-400	-398	-398
63	--	-1232	-1094	-973	-869	-785	-720	-676	-652	-650	-650
34	--	-764	-614	-482	-369	-277	-206	-158	-132	-130	-130
44	--	-847	-699	-569	-458	-367	-298	-250	-225	-222	-222
54	--	-1005	-861	-735	-627	-539	-471	-425	-400	-398	-398

Micronaire Differences Points/lb.	Leaf Grade Differences Points/lb.	Bark Discounts Points/lb.	Strength Differences Points/lb.
Mike Range	Leaf Grade	Disc./ Prem.	Bark Code Disc.
24&below	-1144	1	83
25-26	-969	2	83
27-29	-704	3	70
30-32	-432	4	0
33-34	-252	5	-126
35-49	0	6	-303
50-52	-375	7	-529
53&above	-540		
			Other
			Code
			Disc.
			26
			27
			28
			Level 1
			Level 2
			31&above
			64

<sup>a</sup>Base Price in cents/lb.

Table 3. 1996/97 DPES Weighted Average Price Estimates, East Texas/Oklahoma.

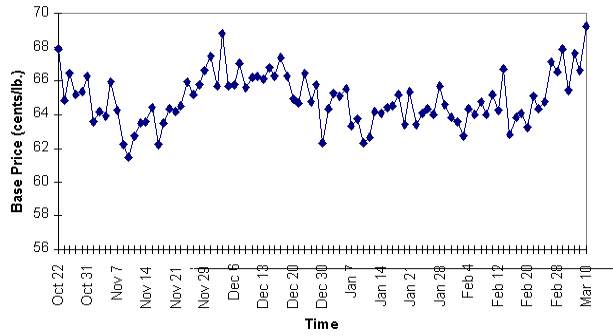
Dept. of Ag. and Appl. Economics, Texas Tech Univ. # Sales: 3512  
 Date: 1996 Crop Region: East Texas/Oklahoma # Bales: 104362  
 Color Grade and Staple Premiums and Discounts in Points/lb.

Staple Length											
Color	28	29	30	31	32	33	34	35	36	37	38
Grade											
11	--	-481	-325	-187	-69	27	100	151	179	181	181
21	--	-481	-325	-187	-69	27	100	151	179	181	181
31	--	-486	-330	-192	-75	22	95	145	173	176	176
41	--	-573	-418	-283	-167	-73	64.41 <sup>a</sup>	50	76	79	79
51	--	-737	-588	-456	-343	-251	-181	-133	-108	-105	-105
61	--	-974	-830	-704	-596	-508	-440	-394	-372	-369	-369
71	--	--	--	--	--	--	--	--	--	--	--
12	--	-560	-406	-270	-154	-59	13	63	90	92	92
22	--	-560	-406	-270	-154	-59	13	63	90	92	92
32	--	-565	-411	-275	-159	-65	8	58	84	87	87
42	--	-651	-499	-365	-251	-157	-86	-37	-11	-9	-9
52	--	-813	-666	-536	-425	-334	-264	-217	-193	-190	-190
62	--	-1047	-905	-780	-674	-587	-520	-475	-453	-451	-451
23	--	-755	-606	-474	-362	-270	-200	-153	-127	-125	-125
33	--	-759	-610	-479	-367	-275	-205	-158	-132	-130	-130
43	--	-842	-695	-566	-455	-365	-296	-250	-225	-222	-222
53	--	-999	-857	-731	-624	-536	-469	-425	-400	-398	-398
63	--	-1225	-1088	-968	-865	-781	-716	-676	-652	-650	-650
34	--	-759	-610	-479	-367	-275	-205	-158	-132	-130	-130
44	--	-842	-695	-566	-455	-365	-296	-250	-225	-222	-222
54	--	-999	-857	-731	-624	-536	-469	-425	-400	-398	-398

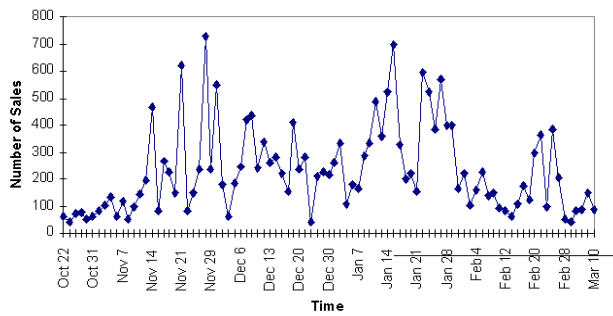
Micronaire Differences Points/lb.	Leaf Grade Differences Points/lb.	Bark Discounts Points/lb.	Strength Differences Points/lb.
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Mike Range	Leaf Grade	Disc./ Prem.	Bark Code	Disc.	Grams/ Tex.	Disc./ Prem.
24&below	-1144	1	83	Level 1	-241	18&below -63
25-26	-969	2	83	Level 2	-794	19 -53
27-29	-704	3	70	-----	20	-44
30-32	-432	4	0	Other	21	-34
33-34	-252	5	-126	Discounts	22	-24
35-49	0	6	-303	Points/lb.	23	-15
50-52	-375	7	-529	-----	24 & 25	0
53&above	-540	-----	Other	Code	Disc.	26 15
						27 24
						28 34
						Level 1 -456 29 44
						Level 2 -853 30 54
						----- 31&above 64

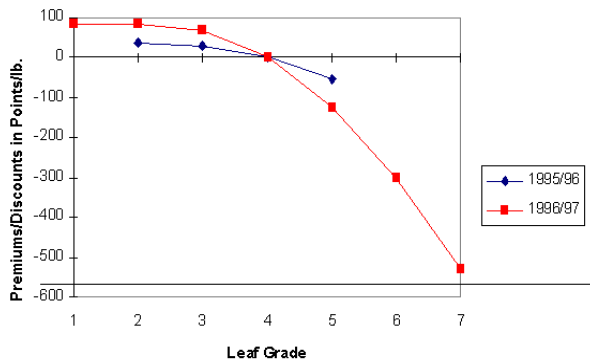
<sup>a</sup>Base Price in cents/lb.



**Figure 1. Movement of Base Price for the 1996/97 Marketing Year, West Texas.**



**Figure 2. Daily Volume of Transactions for the 1996/97 Marketing Year, West Texas.**



**Figure 3. Leaf Grade Premiums/Discounts, 1995/96 and 1996/97, West Texas.**

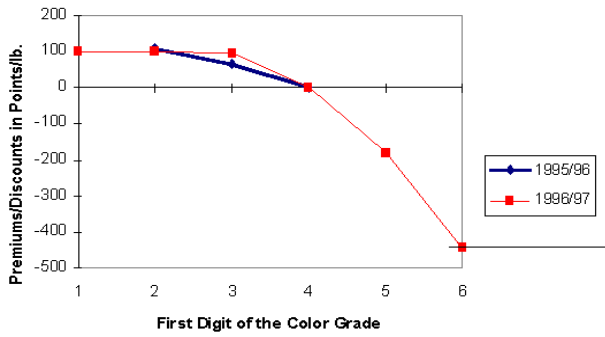


Figure 4. 1st Digit of Color Grade Premiums/Discounts, 1995/96 and 1996/97, West Texas.

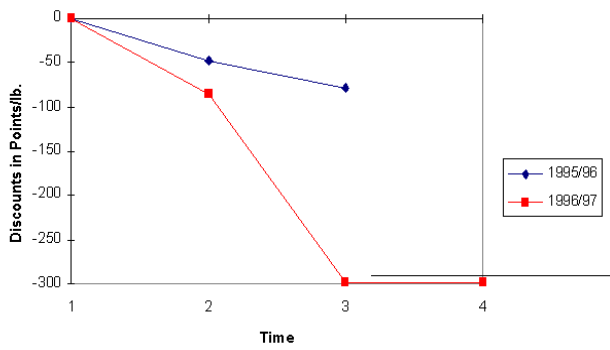


Figure 5. 2nd Digit of Color Grade Discounts, 1995/96 and 1996/97, West Texas.

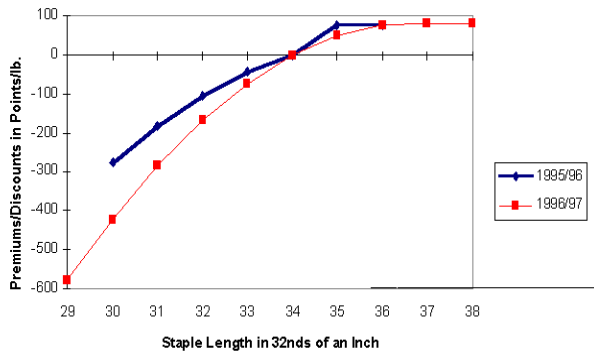


Figure 6. Staple Length Premiums/Discounts, 1995/96 and 1996/97, West Texas.

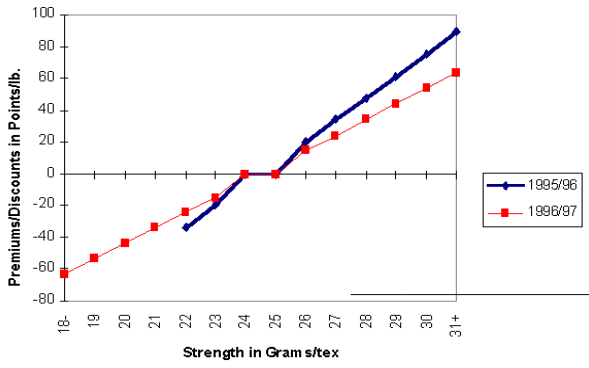


Figure 7. Strength Premiums/Discounts, 1995/96 and 1996/97, West Texas.

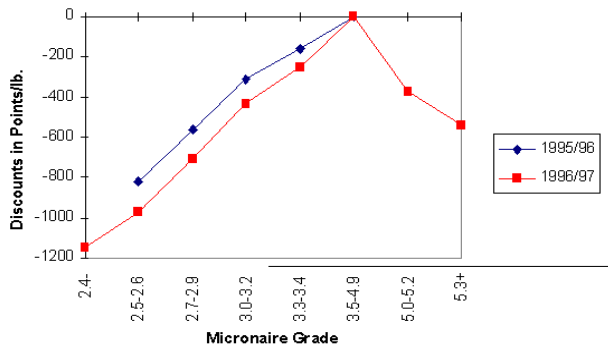


Figure 8. Micronaire Discounts, 1995/96 and 1996/97, West Texas.

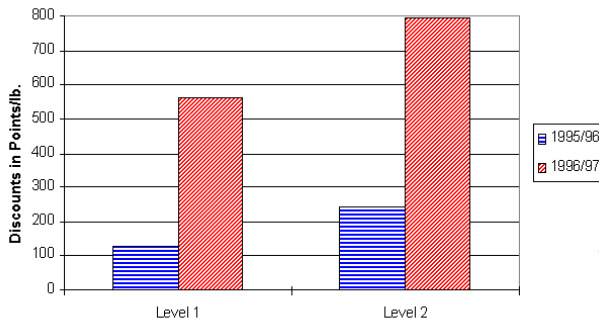


Figure 9. Bark Discounts, 1995/96 and 1996/97, West Texas.