

**TEXAS-OKLAHOMA PRODUCER COTTON MARKET
SUMMARY: 1998/99**

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Abstract

The size of the 1998 Texas-Oklahoma cotton crop decreased considerably from the previous year and the average producer price declined for the third year in a row. The average price received by producers during the 1998/99 marketing year was 51.14 cents/lb., which was 6.85 cents/lb. lower than the previous marketing year. The 1998 crop was generally of good quality. With the exception of the first digit of the color grade, staple, and strength, the average quality showed improvement over the 1997 crop. With the exception of level 2 bark and the first digit of the color grade, price discounts for the 1998 crop increased for all quality attributes, while premiums for staple 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 cotton sales and estimates 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 official HVI standards used by the U.S. Department of Agriculture 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 1998/99 marketing year (1998 crop).

1998/99 Statistics

A total of 798,187 bales (718,508 from West Texas and 79,679 from East Texas/Oklahoma), and 9,660 sales transactions were used in DPES computations. Total volume decreased by about 57% over that of the 1997 crop, partially because of a decrease in crop size and a 15% increase in forward contracting. Overall, the DPES used an estimated 50% of producers' cash market sales in 1998/99.

Table 1 provides the simple averages for the 1998/99 and 1997/98 marketing years. The 1998 crop was of high quality. Overall, quality and variation in quality improved slightly from the previous year. However, average prices continued to fall for the fourth year in a row.

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 1998/99 marketing year covered a shorter time period (mid October to mid March) than the previous year. The majority of the sales took place between the end of October and the end of January. After February 1, sales dropped off sharply, and, with the exception of occasional surges, the market remained largely inactive until the end of the season (Figure 1).

The average price received by producers for 1998/99 was 51.14 cents/lb. (Table 1), down from the previous three years. The pattern of base price movements throughout the first half of the year revealed a distinct downward trend (Figure 2) which continued throughout the duration of the marketing year. This was in contrast to the previous year in which prices exhibited a similar downward pattern but picked up slightly towards the end of the marketing year.

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

Average premiums for leaf grade in 1998/99 did not exhibit any significant change over those of the 1997/98 marketing year (Figure 3). Discounts, however, increased considerably over the previous year for increasing levels of leaf content. Variations in leaf grade premiums showed little change from the 1997/98 marketing year.

Color Grade

Discounts for color fluctuated widely throughout the entire 1998/99 season. Both average premiums and discounts for the first digit of the color grade remained virtually identical to those of the previous marketing year (Figure 4). Discounts for the second digit of the color grade increased significantly, exhibiting a discount upwards of 1000 points/lb. for a grade 4 (Figure 5).

Staple

Discounts for staple remained relatively stable throughout most of the year with a slight upward trend beginning at the end of November and continuing throughout remainder of the year. Premiums for 1998/99 increased slightly while discounts increased dramatically over those of 1997/98, reaching a difference of almost 750 points/lb. towards the high end of the discount range (Figure 6).

Strength

Discounts and premiums for strength were erratic throughout the entire 1998/99 season, never revealing any discernable pattern. Both premiums and discounts increased over 1997/98 levels (Figure 7). There were several days, as in previous years, in which strength did not affect price.

Micronaire

Micronaire discounts in 1998/99 were slightly more erratic than those seen in 1997/98, consistent with patterns seen in earlier years. Discounts for the 1998 crop increased for all ranges of micronaire, differing by as much as 400 points above the previous year's levels (Figure 8).

Bark

Level 1 bark discounts fluctuated widely throughout the first of the season, but began to stabilize around the middle of December, after which they displayed a downward trend until the end of the marketing year. Average discounts for level 1 bark were similar to those seen the previous year, while average level 2 bark discounts decreased to around 800 points/lb. in 1998/99 (Figure 9).

Conclusions

The 1998 crop was of generally high quality for Texas and Oklahoma and experienced no major change in quality from the previous year. However, once again, despite the overall quality of the cotton crop, the price decreased from the previous year. The volume of producer spot market sales showed a dramatic decrease of 57% from the volume recorded during the 1997/98 marketing year, possibly due to an increase in forward contracting, a decrease in the crop size, and an increase in marketing pool participation. Discounts for leaf grade, the second digit of the color grade, micronaire, and level 1 bark increased in 1998/99. Discounts for the first digit of the color grade remained similar to the previous year, while discounts for level 2 bark decreased. Both discounts and premiums for staple length and strength increased compared to the 1997/98 marketing year. The decrease in the size of the 1998 crop along with the increase in forward contracting would suggest that prices spot market prices should increase over those of the previous year. This, however, was not the case, as the average spot market price fell once again for the third year in a row. Of the cotton sold on the spot market, overall abundance of high quality cotton may have allowed buyers to be more discriminating with respect to quality, accounting for the increase in price differentials as the quality deviated from base levels. The information gathered throughout the year, however, provides no explanation as to why prices have continued to remain on their downward trend.

Acknowledgements

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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.

Hoelscher, K., D. Ethridge, and S. Misra. "Texas-Oklahoma Producer Cotton Market Summary: 1997/98." Department of Agricultural and Applied Economics, Texas Tech University, CER-98-39.

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

Attribute	Average		95% Population Range ^a	
	1998/99	1997/98	1998/99	1997/98
Price (cents/lb.)	51.14	57.99	44.05 - 58.23	49.87 - 66.10
Bales per Sale	82	87	1 - 281	1 - 347
Leaf Grade	3.29	3.40	1.40 - 5.19	1.37 - 5.43
Color Grade (1)	2.84	2.48	1.58 - 4.09	1.06 - 3.91
Color Grade (2)	1.37	1.70	1 - 2.25	1 - 3.15
Staple	33.21	33.57	30.86 - 35.56	31.31 - 35.83
Strength	27.70	28.68	25.30 - 30.06	25.49 - 31.87
Micronaire	4.17	3.95	3.25 - 5.10	3.08 - 4.83
Level 1 Bark (%)	11.90	22.74	0 - 49.67	0 - 80.57
Level 2 Bark (%)	0.00	0.95	0 - 0.37	0 - 8.95
Level 1 Other (%)	0.30	0.86	0 - 4.00	0 - 11.09
Level 2 Other (%)	0.00	0.48	0 - 0.47	0 - 7.71

^aThe range within which 95% of the population will fall.

Table 2. 1998/99 Weighted Average Price Estimates from the DPES,
West Texas

Yearly Weighted Average of the Daily Spot Cotton Price Estimates												
Dept. of Ag. and Applied Econ., Texas Tech Univ.											# Sales: 8,159	
Date: 1998 Crop					Region: West Texas			# Bales: 718,508				
Color Grade and Staple Premiums and Discounts in Points/lb. ^a												
Staple Length												
Color	28	29	30	31	32	33	34	35	36	37	38	Grade
11	--	-995	-716	-461	-236	-47	101	204	259	266	--	
21	--	-995	-716	-461	-236	-47	101	204	259	266	--	
31	--	-1009	-731	-477	-253	-65	83	186	241	248	--	
41	--	-1075	-801	-551	-330	-145	51.34 ^b	101	156	162	--	
51	--	-1189	-923	-680	-466	-286	-145	-46	7	13	--	
61	--	-1348	-1093	-859	-654	-481	-346	-251	-200	-194	--	
71	--	--	--	--	--	--	--	--	--	--	--	
12	--	-1109	-837	-589	-371	-187	-43	57	111	118	--	
22	--	-1109	-837	-589	-371	-187	-43	57	111	118	--	
32	--	-1123	-852	-605	-387	-204	-61	39	93	100	--	
42	--	-1186	-920	-677	-462	-282	-141	-43	10	17	--	
52	--	-1297	-1039	-802	-594	-419	-282	-186	-134	-128	--	
62	--	-1452	-1204	-977	-777	-609	-477	-386	-336	-330	--	
23	--	-1413	-1162	-933	-731	-561	-428	-335	-285	-279	--	
33	--	-1426	-1176	-947	-746	-577	-444	-352	-302	-296	--	
43	--	-1485	-1239	-1014	-816	-649	-519	-428	-379	-373	--	
53	--	-1588	-1348	-1130	-937	-775	-649	-560	-512	-507	--	
63	--	-1731	-1501	-1291	-1106	-951	-829	-745	-699	-693	--	
34	--	-1876	-1656	-1455	-1278	-1130	-1013	-932	-888	-883	--	
44	--	-1928	-1711	-1514	-1340	-1193	-1079	-999	-956	-950	--	
54	--	-2018	-1808	-1616	-1446	-1304	-1193	-1115	-1073	-1068	--	
Micronaire	Leaf Grade		Bark		Strength							
Differences	Differences		Discounts		Differences							
Points/lb.	Points/lb.		Points/lb.		Points/lb.							
Mike	Leaf	Disc./	Bark	Grams/		Disc./						
Range	Grade	Prem.	Code	Disc.	Tex.	Prem.						
24&below	--	1	--	Level 1	-181	18&below	--					
25-26	-853	2	107	Level 2	-822	19	--					
27-29	-615	3	88			20	--					
30-32	-371	4	0	Other		21	--					
33-34	-211	5	-153	Discounts		22	-192					
35-49	0	6	-365	Points/lb.		23	-106					
50-52	-373	7	-628			24 & 25	0					
53&above	-529			Other		26	78					
				Code	Disc.	27	113					
						28	136					
				Level 1	-1253	29	144					
				Level 2	--	30	144					
						31&above	144					

^a100 points = 1 cent

^bBase Price in cents/lb.

Table 3. 1998/99 Weighted Average Price Estimates from the DPES, East Texas/Oklahoma

Yearly Weighted Average of the Daily Spot Cotton Price Estimates
 Dept. of Ag. and Applied Econ., Texas Tech Univ. # Sales: 1,501
 Date: 1998 Crop Region: East Texas/Oklahoma # Bales: 79,679
 Color Grade and Staple Premiums and Discounts in Points/lb.^a

Color Grade	Staple Length											
	28	29	30	31	32	33	34	35	36	37	38	
11	--	-991	-713	-459	-235	-47	100	203	258	265	--	
21	--	-991	-713	-459	-235	-47	100	203	258	265	--	
31	--	-1005	-728	-475	-252	-64	82	185	240	247	--	
41	--	-1070	-797	-548	-329	-144	51.11 ^b	101	155	162	--	
51	--	-1184	-919	-677	-464	-284	-144	-46	7	13	--	
61	--	-1342	-1088	-856	-651	-479	-344	-250	-200	-194	--	
71	--	--	--	--	--	--	--	--	--	--	--	
12	--	-1104	-834	-587	-369	-186	-43	57	111	117	--	
22	--	-1104	-834	-587	-369	-186	-43	57	111	117	--	
32	--	-1118	-848	-602	-385	-203	-60	39	93	99	--	
42	--	-1181	-916	-674	-460	-281	-140	-42	10	17	--	
52	--	-1292	-1034	-799	-591	-417	-280	-185	-134	-128	--	
62	--	-1446	-1198	-973	-773	-606	-475	-384	-335	-329	--	
23	--	-1407	-1157	-929	-728	-559	-426	-334	-284	-278	--	
33	--	-1420	-1171	-943	-743	-574	-442	-350	-301	-295	--	
43	--	-1478	-1233	-1009	-812	-646	-516	-426	-377	-371	--	
53	--	-1580	-1342	-1125	-933	-772	-646	-558	-510	-505	--	
63	--	-1723	-1494	-1285	-1101	-947	-826	-741	-696	-690	--	
34	--	-1868	-1649	-1449	-1273	-1125	-1009	-928	-884	-879	--	
44	--	-1919	-1704	-1507	-1334	-1188	-1074	-994	-951	-946	--	
54	--	-2009	-1800	-1608	-1440	-1298	-1188	-1110	-1068	-1064	--	

Micronaire Differences Points/lb.	Leaf Grade Differences Points/lb.	Bark Discounts Points/lb.	Strength Differences Points/lb.
Mike Range	Leaf Grade	Bark Code	Grams/ Disc. Tex. / Disc. Prem.
24&below	-- 1	-- Level 1	-180 18&below --
25-26	-849 2	106 Level 2	-818 19 --
27-29	-612 3	87	20 --
30-32	-370 4	0	21 --
33-34	-210 5	-152	Discounts 22 -191
35-49	0 6	-363	Points/lb. 23 -106
50-52	-371 7	-625	24 & 25 0
53&above	-527		Other 26 78
		Code Disc.	27 113
			28 135
		Level 1	-1247 29 143
		Level 2	-- 30 143
			31&above 143

^a100 points = 1 cent
^bBase Price in cents/lb.

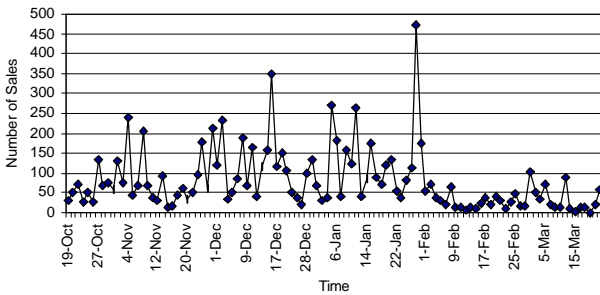


Figure 1. Daily Volume of Transactions for the 1998/99 Marketing Year, West Texas

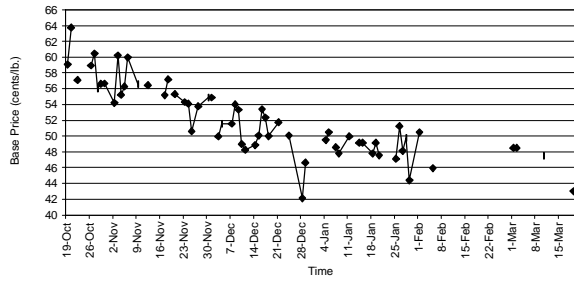


Figure 2. Movement of Base Price for the 1998/99 Marketing Year, West Texas.

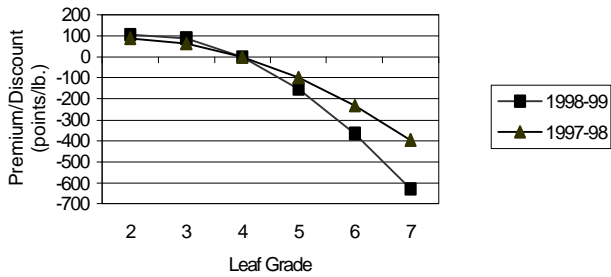


Figure 3. Leaf Grade Premiums/Discounts, 1997/98 and 1998/99, West Texas.

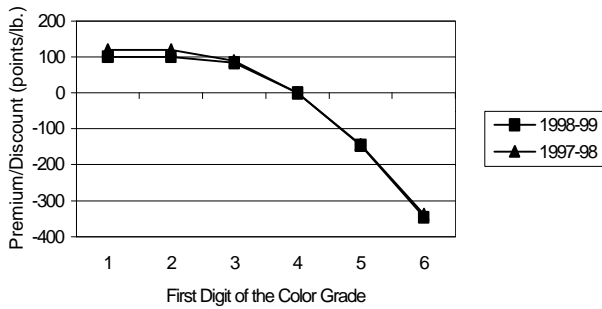


Figure 4. First Digit of the Color Grade Premiums/Discounts 1997/98 and 1998/99, West Texas.

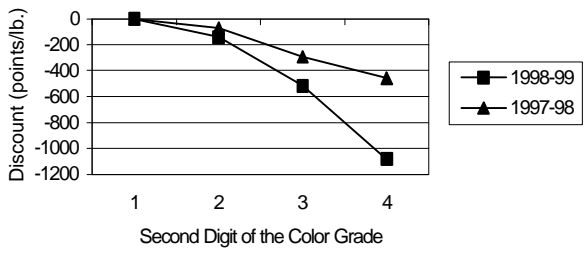


Figure 5. 2nd Digit of the Color Grade Discounts, 1997/98 and 1998/99, West Texas.

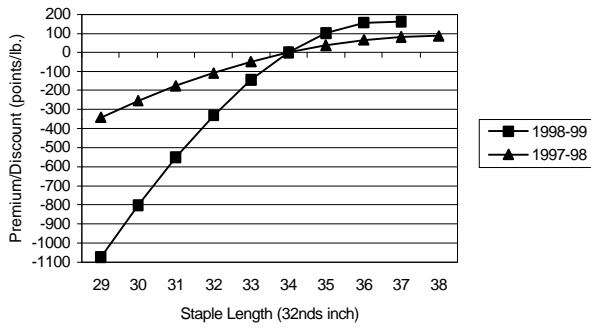


Figure 6. Staple Length Premiums/Discounts, 1997/98 and 1998/99, West Texas.

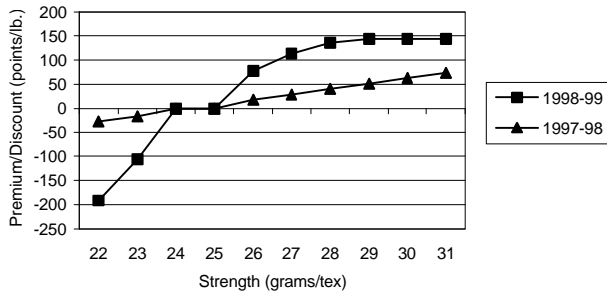


Figure 7. Strength Premiums/Discounts, 1997/98 and 1998/99, West Texas.

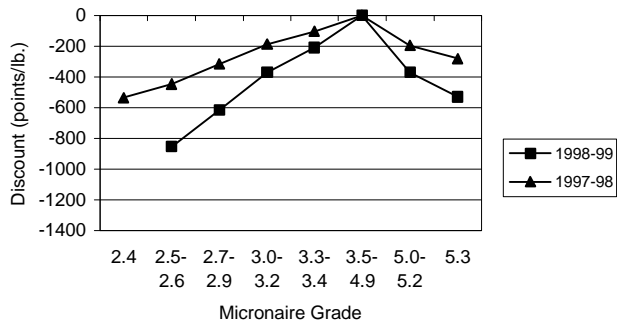


Figure 8. Micronaire Discounts, 1997/98 and 1998/99, West Texas.

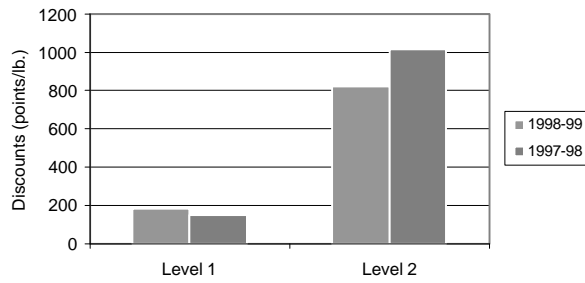


Figure 9. Bark Discounts, 1997/98 and 1998/99, West Texas.