AN ESTIMATED 1998 TEXAS-OKLAHOMA PRE-SEASON PRICE SCHEDULE BASED ON MARKET HISTORY

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Abstract

Having a source of timely and reliable market information is of the utmost importance to the cotton industry. Texas Tech University has developed a price schedule for upcoming cotton marketing years for the Texas and Oklahoma cotton marketing regions based on the market history of those regions. This schedule is meant to provide the industry with a means of examining the market history of cotton quality premiums and discounts for Texas and Oklahoma and serve as a pre-marketing year price discovery mechanism.

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 which uses sales of cotton from electronic cotton markets to independently estimate and report prices and quality premiums and discounts for various quality combinations in Texas and 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

Under the Commodity Credit Corporation (CCC) loan program, the CCC makes nonrecourse loans to producers based on a loan schedule which 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 forward contract pricing to the allocation of dividend payments to members of marketing associations. This schedule has also been assumed to be a price discovery mechanism used by the industry 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 such as forward contracting.

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DPES Pre-Season Price Schedule

Texas Tech University has developed a method of estimating a price schedule for upcoming marketing years based on market history (Table 1). This schedule is meant to serve as an alternative pre-marketing year price discovery mechanism. 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. This replaced the method of using the Daily Spot Cotton Quotations (DSCQ) to adjust the schedule, as they have been found to not accurately represent market prices in the Texas and Oklahoma cotton markets.

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 averages 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 (1998).

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 which may be used to provide buyers and sellers with an overall picture of the cotton spot market in Texas and Oklahoma.

Conclusions

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 which presents an accurate representation of the cotton market. Therefore, beginning in the spring of 1999, the DPES pre-season price schedule for Texas and Oklahoma will be calculated on a yearly basis and distributed on a request basis to the cotton industry each spring so as to provide an alternative means of examining the market history of quality premiums and discounts.

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Table 1. 1998 DPES Pre-Season Price Schedule for Texas-Oklahoma

		Staple	26-29	30	31	32	33	34	35	36	37+
	Color	Leaf	◄ points per pound ►								
WHITE	SM & better 11 & 21	Leaf 1-2	-260	-110	-15	65	131	184	221	243	252
		3	-270	-120	-26	54	120	173	210	232	241
		4	-318	-169	-76	3	69	121	157	180	189
		5	-404	-257	-165	-87	-22	29	65	87	96
		6	-526	-382	-292	-215	-152	-102	-67	-46	-37
		7	-679	-539	-451	-377	-315	-267	-233	-212	-203
	MID 31	Leaf 1-2	-300	-150	-57	23	89	141	178	200	209
		3	-310	-160	-68	12	78	130	167	189	198
		4	-358	-210	-118	-39	27	78	115	137	146
		5	-443	-296	-206	-128	-64	-13	23	45	53
		6	-564	-421	-332	-256	-193	-143	-108	-87	-78
		7	-717	-577	-491	-417	-355	-307	-273	-252	-244
	SLM 41	Leaf 1-2	-373	-225	-133	-55	10	62	98	120	128
		3	-383	-235	-144	-65	0	51	87	109	117
		4	-430	-284	-193	-115	-51	Base	36	58	66
		5	-514	-370	-280	-204	-140	-90	-55	-33	-25
		6	-634	-492	-405	-330	-268	-219	-184	-163	-155
		7	-784	-646	-561	-488	-428	-380	-347	-326	-319
	LM 51	Leaf 1-2	-486	-341	-251	-174	-110	-60	-25	-3	5
		3	-496	-351	-261	-184	-121	-71	-35	-14	-5
		4	-542	-398	-309	-233	-170	-121	-85	-64	-56
		5	-624	-482	-395	-320	-258	-209	-174	-153	-145
		6	-741	-602	-517	-443	-383	-335	-301	-280	-272
		7	-888	-753	-670	-598	-448	-493	-460	-440	-432
	SGO 61	Leaf 1-2	-634	-492	-405	-331	-269	-221	-186	-165	-157
		3	-643	-502	-415	-341	-279	-231	-196	-176	-167
		4	-688	-548	-462	-388	-327	-279	-245	-225	-216
		5	-768	-630	-545	-472	-412	-365	-331	-311	-303
		6	-882	-747	-664	-593	-533	-487	-454	-435	-426
		7	-1025	-893	-812	-743	-686	-641	-609	-589	-582
	GO 71	Leaf 1-2	-815	-679	-595	-523	-464	-417	-384	-364	-356
		3	-825	-688	-605	-533	-473	-427	-394	-374	-366
		4	-868	-733	-650	-579	-520	-474	-441	-421	-413
		5	-945	-811	-730	-660	-602	-556	-524	-504	-497
		6	-1055	-639	-844	-775	-718	-674	-643	-623	-616
		7	-1192	-1065	-987	-920	-865	-822	-791	-773	-765
LIGHT SPOTTED	SM & better 12 & 22	Leaf 1-2	-337	-189	-96	-17	48	99	139	161	168
		3	-347	-199	-107	-28	38	89	128	150	157
		4	-395	-248	-156	-78	-13	38	76	98	106
		5	-479	-334	-244	-167	-103	-52	-15	7	14
		6	-600	-457	-369	-294	-231	-182	-145	-124	-117
		7	-751	-612	-526	-453	-392	-345	-308	-288	-281
	MID 32	Leaf 1-2	-377	-229	-137	-58	-2	58	94	116	125
		3	-387	-239	-148	-69	-4	47	83	105	114
		4	-434	-287	-197	-119	-55	-4	32	54	63
		5	-518	-373	-284	-207	-144	-94	-58	-37	-28
		6	-638	-496	-409	-334	-271	-223	-188	-167	-159
		7	-788	-650	-565	-492	-432	-384	-350	-330	-322
	SLM 42	Leaf 1-2	-449	-303	-212	-135	-70	-20	16	37	46
		3	-459	-313	-222	-145	-81	-31	5	27	35
		4	-505	-361	-271	-194	-131	-81	-45	-24	-15
		5	-588	-445	-357	-282	-219	-170	-135	-114	-105
		6	-706	-566	-480	-406	-345	-297	-263	-242	-234
		7	-855	-718	-634	-563	-503	-456	-423	-403	-395
	LM 52	Leaf 1-2	-560	-416	-328	-252	-189	-140	-105	-83	-75
		3	-569	-426	-338	-262	-200	-151	-115	-94	-86
		4	-615	-473	-386	-311	-249	-200	-165	-144	-135
		5	-696	-556	-470	-396	-335	-287	-252	-232	-223
		6	-812	-675	-590	-518	-458	-411	-377	-357	-349
		7	-957	-823	-741	-671	-613	-568	-534	-515	-507
	SGO 62	Leaf 1-2	-705	-566	-480	-406	-346	-298	-264	-243	-235
		3	-715	-575	-490	-416	-356	-308	-274	-254	-245
		4	-759	-621	-536	-463	-403	-356	-322	-302	-294
		5	-838	-702	-618	-546	-487	-440	-327	-387	-379
		6	-950	-817	-735	-665	-607	-561	-529	-509	-501
		7	BG	BG	BG	BG	BG	BG	BG	BG	BG

BG indicates below grade cotton

Table 1. 1998 DPES Pre-Season Price Schedule for Texas-Oklahoma (cont'd.)

	Color	Staple / Leaf	26-29	30	31	32	33	34	35	36	37+
			◄ points per pound ►								
SPOTTED	SM & better 13 & 23	Leaf 1-2	-510	-365	-276	-199	-136	-87	-51	-29	-21
		3	-520	-375	-286	-210	-146	-97	-61	-40	-32
		4	-566	-423	-334	-258	-196	-147	-111	-90	-82
		5	-648	-506	-419	-345	-283	-235	-200	-179	-170
		6	-764	-626	-541	-468	-407	-360	-326	-306	-297
		7	-911	-776	-693	-622	-563	-518	-484	-465	-457
	MID 33	Leaf 1-2	-547	-403	-314	-238	-175	-126	-91	-69	-61
		3	-557	-413	-324	-249	-186	-136	-101	-80	-71
		4	-603	-460	-372	-297	-235	-186	-151	-130	-121
		5	-684	-543	-457	-383	-321	-273	-239	-218	-210
		6	-800	-662	-578	-505	-445	-398	-364	-344	-336
		7	-945	-811	-729	-659	-600	-554	-522	-502	-494
	SLM 43	Leaf 1-2	-616	-474	-387	-312	-249	-201	-166	-145	-137
		3	-626	-484	-397	-322	-260	-211	-177	-162	-147
		4	-671	-531	-444	-293	-308	-260	-226	-205	-197
		5	-751	-613	-527	-454	-316	-346	-312	-292	-284
		6	-866	-730	-647	-575	-516	-469	-436	-416	-408
		7	-1010	-877	-796	-727	-669	-624	-592	-572	-565
	LM 53	Leaf 1-2	-723	-584	-498	-425	-364	-316	-282	-262	-254
		3	-733	-594	-508	-435	-374	-327	-293	-272	-264
		4	-777	-639	-555	-482	-421	-374	-341	-321	-312
		5	-856	-720	-636	-565	-505	-459	-426	-406	-398
		6	-968	-835	-753	-683	-625	-579	-547	-527	-520
		7	-1108	-979	-899	-831	-775	-730	-699	-680	-673
	SGO 63	Leaf 1-2	-863	-727	-644	-573	-514	-467	-434	-415	-407
		3	-872	-737	-654	-583	-523	-477	-444	-425	-417
		4	-915	-781	-699	-628	-570	-524	-491	-472	-464
		5	-992	-859	-778	-709	-651	-606	-574	-554	-547
		6	-1101	-971	-892	-823	-767	-723	-691	-673	-665
		7	BG	BG	BG	BG	BG	BG	BG	BG	BG
TINGED	SM 24	Leaf 1-2	-658	-540	-451	-375	-313	-265	-231	-211	-204
		3	-663	-545	-457	-381	-319	-270	-236	-217	-210
		4	-706	-589	-501	-426	-364	-316	-283	-263	-257
		5	-785	-669	-583	-509	-448	-400	-367	-348	-342
		6	-897	-784	-699	-627	-567	-521	-489	-470	-463
		7	BG	BG	BG	BG	BG	BG	BG	BG	BG
	MID 34	Leaf 1-2	-722	-582	-495	-421	-360	-313	-278	-257	-249
		3	-731	-592	-506	-432	-370	-323	-288	-268	-260
		4	-776	-637	-552	-479	-418	-371	-337	-316	-308
		5	-855	-718	-634	-562	-502	-456	-422	-402	-394
		6	-967	-833	-751	-681	-622	-577	-544	-524	-517
		7	BG	BG	BG	BG	BG	BG	BG	BG	BG
	SLM 44	Leaf 1-2	-788	-650	-565	-492	-431	-384	-350	-330	-322
		3	-797	-660	-575	-502	-441	-394	-360	-340	-332
		4	-842	-705	-621	-548	-488	-441	-408	-388	-380
		5	-919	-785	-702	-630	-571	-525	-492	-473	-465
		6	-1031	-899	-817	-748	-690	-645	-612	-593	-586
		7	BG	BG	BG	BG	BG	BG	BG	BG	BG
	LM 54	Leaf 1-2	-898	-755	-672	-670	-541	-495	-462	-442	-434
		3	-907	-765	-682	-680	-551	-505	-472	-452	-445
		4	-950	-809	-727	-725	-597	-552	-519	-499	-492
		5	-1027	-887	-806	-804	-678	-633	-601	-582	-574
		6	BG	BG	BG	BG	BG	BG	BG	BG	BG
		7	BG	BG	BG	BG	BG	BG	BG	BG	BG

Micronaire Differences

Micronaire reading	32 & Shorter Points per pound
5.3 and above	-410
5.0 through 5.2	-289
4.3 through 4.9	-68
3.7 through 4.2	0
3.5 through 3.6	-72
3.3 through 3.4	-148
3.0 through 3.2	-267
2.7 through 2.9	-451
2.5 through 2.6	-633
2.4 and below	-750

Strength Premiums and Discounts

Strength	Points per pound
18.5-19.4	-119
19.5-20.4	-94
20.5-21.4	-70
21.5-22.4	-48
22.5-23.4	-28
23.5-25.4	0
25.5-27.4	29
27.5-29.4	54
29.5-30.4	69
30.5 and above	74

Bark Discounts

Bark Level	Points per pound
Level 1	-161
Level 2	-658

BG indicates below grade cotton