TEXAS COTTON QUALITY EVALUATION

CROP OF 1992

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RESEARCH AND DEVELOPMENT

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NOTICE OF ERROR IN TEXAS COTTON QUALITY EVALUATION, CROP OF 1992

It has been brought to our attention that the F/MT Fineness and F/MT Maturity labels are reversed in the HVI data tables for the Texas Cotton Quality Evaluation, Crop of 1992, which was recently sent to you.

Please insert this notice in the booklet.

We regret this error and offer our apologies.

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Crop of 1992

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TEXAS COTTON QUALITY EVALUATION – CROP OF 1992

INTRODUCTION

This is the thirteenth of a series of annual reports which provide interested parties with information regarding the quality of cotton produced in Texas. All processing and testing is conducted entirely at the International Center for Textile Research and Development.

In order to perform this evaluation, we attempt to obtain cottons which are as representative of the crop as possible in terms of quality. Furthermore, we attempt to select the most popular varieties planted, using data published by the USDA. Since we must limit the size of the study, we try to select two bales from each of the USDA Marketing Service Office areas within Texas, including Abilene, Altus (OK), Corpus Christi, El Paso, Harlingen, Lamesa, Lubbock and Waco.

Some differences in this selection occurred. We were able to locate only one bale of the desired variety from the Waco area and we included a third bale from both Lamesa and Lubbock. The varieties tested from the Altus, OK area are also grown in the state of Texas and are included in this study of Texas cottons due to their similarity to their Oklahoma counterparts. The "Production Area" shown on the data tables includes the ginning location first and then the USDA Marketing Service Area.

Samples of fiber are taken from each bale and tested by Individual Instruments, High Volume Instrument (HVI), the IIC/Shirley FMT III and the Peyer Texlab AL-101. Also, this year we have added the Zellweger Uster AFIS instrument, which measures length, diameter, neps and trash.

Figure 1 shows the sequence of machinery used to produce the yarns tested in the study. The process remains the same as the previous year (1991) with slight changes in machine speeds.

Three yarn numbers were produced by each rotor or ring spinning machine used in the study. Spinning specifications are shown in Table I. We continue to evaluate yarns from the Rieter m1/1 machine to maintain the continuity of the data base. As in the previous year (1991), we have provided additional quality information by using yarns produced on the Schlafhorst Autocoro SE-9 machine running at 100,000 rpm.

We are grateful to the Texas Food and Fibers Commission for sponsoring this program and assisting in publishing this report. In addition, we would like to thank the Plains Cotton Cooperative Association of Lubbock, Southwestern Irrigated Cotton Growers Association of El Paso and the Caney Valley Cotton Company of Caldwell for their help in locating the bales for this study.

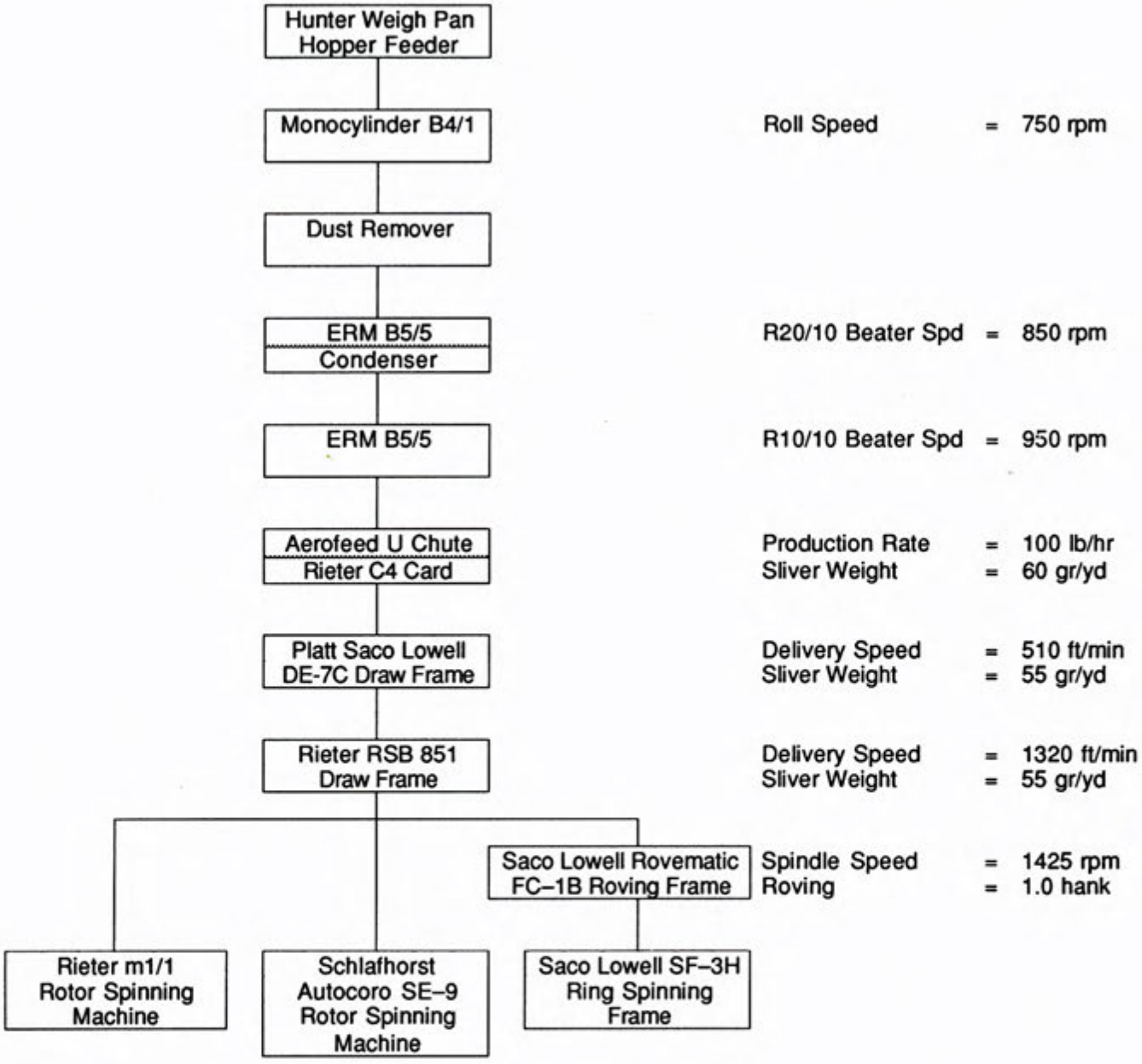

FIGURE 1

OUTLINE OF MECHANICAL PROCESSES

TABLE I
SPINNING SPECIFICATIONS

(a) ROTOR SPINNING

Sliver	55 gr/yd Finisher Drawframe					
Machine	Rieter m1/1			Schlafhorst Autocoro SE-9		
Nominal Yarn Number (N_e)	10	22	30	10	22	30
Rotor Type	45 N St			T 231 D		
Rotor Speed (rpm)	55,000			100,000		
Opening Roller Type	T.52			B 174 DN		
Opening Roller Speed (rpm)	7300			7500		
Draft (approximate)	66	145	198	66	145	198
Twist Multiplier (α_e)	4.85	4.80	4.78	4.78	4.79	4.79
Yarn Speed (yd/min)	99.5	67.7	58.3	183.8	123.7	105.9
Navel	Smooth Steel			4-grooved Ceramic + 1.5		
Torque Stop	None			TS 37		

(b) RING SPINNING

Roving Frame	Saco Lowell
Flyer Speed (rpm)	1425
Roving	1.0 hank
Ring Spinning Frame	Saco Lowell SF-3H
Spindle Speed (rpm)	10,000
Ring Diameter (in)	2
Twist Multiplier (α_e)	4.00

TABLE II LOT NUMBER 2389 VARIETY DPL-50 PRODUCTION AREA Raymondville / Harlingen

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	25.27	1/8" Gauge Strength	(g/tex)	22.7	Upper Quartile Length (w)	(in)	1.11
Elongation	(%)	6.25	Elongation	(%)	7.7	Mean Length	(in)	.92
			Length	(in)	1.08	Percent Short Fibers		8.6
2.5% Span Length	(in)	1.042	Uniformity Ratio	(%)	82.3	Diameter	(um)	14.0
Uniformity Ratio	(%)	45.9	Micronaire Index		3.9	Neps	(g)	316
			Reflectance	(Rd)	71.2	Total Trash	(No./g)	411
Micronaire Index		4.07	Yellowness	(+b)	11.2	Peyer AL 101		
			Color Grade		33	Upper Quartile Length (w)	(in)	1.08
Shirley Non-Lint Content	(%)	2.34	Leaf Grade		3	Mean Length	(in)	.89
			F/MT Fineness	(mg/tex)	78.3	CV% of Mean		28.5
			F/MT Maturity	(%)	161	Percent Short Fibers		8.9

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	10.00	22.00	29.55	10.03	21.32	28.96	15.99	22.65	29.27
CV% of Yarn Number	.6	.8	.8	.3	.4	.7	2.3	2.4	2.8
Count-Strength-Product	2306	1855	1675	2357	1851	1714	2215	1932	2033
CV% of CSP	1.0	3.8	4.4	2.0	2.3	2.1	3.3	4.6	3.1
Single-Yarn Test:									
Tenacity (g/tex)	14.02	12.55	11.62	14.16	12.30	11.76	14.88	14.24	13.27
Mean Strength (g)	828	337	232	834	341	240	550	371	268
CV% of Break	6.4	7.5	9.2	5.8	7.9	8.8	10.9	11.1	12.4
Elongation (%)	6.48	5.53	4.89	6.90	5.76	5.33	5.36	5.31	5.07
CV% of Elongation	6.5	9.0	10.8	5.2	7.1	8.5	10.6	10.5	10.1
Spec. Work of Rupture (g/tex)	.509	.372	.301	.539	.377	.322	.429	.389	.338
CV% of Work of Rupture	11.9	14.2	18.6	10.0	14.7	15.5	17.5	18.7	20.8
Initial Modulus (g/tex)	296	271	306	211	232	243	371	308	297
Uster Evenness Test:17.90									
Non-Uniformity (CV%)	13.63	15.68	17.90	12.53	14.82	16.83	18.38	20.35	22.21
Thin Places/1,000 yds	2	41	178	1	20	116	210	345	549
Thick Places/1,000 yds	48	111	294	11	70	226	450	831	1315
Neps/1,000 yds	56	172	786	6	107	729	63	155	498
ASTM Yarn Grade	B	B	C+	B+	C+	B	C	C	C+

TABLE III LOT NUMBER 2390 VARIETY DPL-51 PRODUCTION AREA Raymondville / Harlingen

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	24.23	1/8" Gauge Strength	(g/tex)	25.0	Upper Quartile Length (w)	(in)	1.12
Elongation	(%)	6.25	Elongation	(%)	8.0	Mean Length	(in)	.93
			Length	(in)	1.11	Percent Short Fibers		9.0
2.5% Span Length	(in)	1.060	Uniformity Ratio	(%)	82.4	Diameter	(um)	14.0
Uniformity Ratio	(%)	47.2	Micronaire Index		4.3	Neps	(g)	227
			Reflectance	(Rd)	72.8	Total Trash	(No./g)	402
Micronaire Index		4.63	Yellowness	(+b)	9.2	Peyer AL 101		
			Color Grade		41	Upper Quartile Length (w)	(in)	1.09
			Leaf Grade		3	Mean Length	(in)	.90
Shirley Non-Lint Content	(%)	2.36	F/MT Fineness	(mg/tex)	100.7	CV% of Mean		28.3
			F/MT Maturity	(%)	139	Percent Short Fibers		8.5

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	10.10	21.88	30.29	9.99	21.89	30.60	16.31	21.33	30.22
CV% of Yarn Number	.8	.7	.8	.6	.5	.4	2.9	2.6	2.1
Count-Strength-Product	2250	1838	1677	2249	1885	1778	2292	2029	2011
CV% of CSP	2.9	3.0	2.7	6.4	2.6	4.3	2.5	2.4	4.0
Single-Yarn Test:									
Tenacity (g/tex)	13.79	12.84	11.76	14.30	12.44	12.28	14.75	14.54	13.64
Mean Strength (g)	806	347	229	846	336	237	535	403	267
CV% of Break	6.7	8.7	9.0	5.7	8.3	6.4	12.4	9.5	11.6
Elongation (%)	6.36	5.20	4.74	7.08	5.67	5.31	5.86	5.74	5.07
CV% of Elongation	7.6	9.4	12.7	5.3	7.3	6.1	10.6	8.1	9.1
Spec. Work of Rupture (g/tex)	.491	.367	.296	.548	.377	.339	.449	.417	.346
CV% of Work of Rupture	13.1	15.8	20.7	10.2	14.2	11.9	19.5	16.2	19.0
Initial Modulus (g/tex)	288	270	336	191	270	272	283	287	302
Uster Evenness Test:									
Non-Uniformity (CV%)	13.43	15.53	17.97	12.50	15.28	16.65	17.61	19.03	22.21
Thin Places/1,000 yds	2	32	181	0	34	97	108	165	509
Thick Places/1,000 yds	45	104	294	8	86	197	371	617	1353
Neps/1,000 yds	43	181	733	5	98	512	42	87	458
ASTM Yarn Grade	B	B+	C+	B+	B	B	C	C	C+

TABLE IV LOT NUMBER 2408 VARIETY DPL 5415 PRODUCTION AREA Kleberg / Corpus Christi

FIBER PROPERTIES

Individual Instrument Data			HVI Data:			Uster AFIS		
Stelometer Strength	(g/tex)	24.26	1/8" Gauge Strength	(g/tex)	28.2	Upper Quartile Length (w)	(in)	1.11
Elongation	(%)	6.25	Elongation	(%)	7.6	Mean Length	(in)	.91
			Length	(in)	1.10	Percent Short Fibers		8.9
2.5% Span Length	(in)	1.050	Uniformity Ratio	(%)	82.2	Diameter	(um)	14.6
Uniformity Ratio	(%)	44.9	Micronaire Index		4.9	Neps	(g)	215
			Reflectance	(Rd)	69.4	Total Trash	(No./g)	379
Micronaire Index		4.93	Yellowness	(+b)	9.5	Peyer AL 101		
			Color Grade		42	Upper Quartile Length (w)	(in)	1.09
Shirley Non-Lint Content	(%)	2.52	Leaf Grade		5	Mean Length	(in)	.89
			F/MT Fineness	(mg/tex)	89.1	CV% of Mean		29.3
			F/MT Maturity	(%)	189	Percent Short Fibers		9.7

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	10.13	22.48	30.54	10.07	22.04	30.19	16.48	22.08	29.63
CV% of Yarn Number	.7	.8	.7	.4	.6	.7	1.8	2.0	2.0
Count-Strength-Product	2326	1847	1715	2292	1949	1699	2122	1958	1927
CV% of CSP	1.9	2.8	3.2	1.3	4.4	3.0	3.3	4.6	4.7
Single-Yarn Test:									
Tenacity (g/tex)	13.70	12.77	12.53	13.93	12.82	11.92	13.99	14.04	12.65
Mean Strength (g)	798	336	242	817	343	233	510	376	252
CV% of Break	5.9	7.5	9.0	5.7	8.7	9.5	11.9	10.6	10.4
Elongation (%)	6.41	5.34	4.91	6.67	5.56	5.03	5.16	5.42	4.83
CV% of Elongation	6.8	10.0	10.1	5.5	8.0	8.6	11.2	9.7	9.3
Spec. Work of Rupture (g/tex)	.493	.373	.329	.517	.385	.312	.391	.390	.315
CV% of Work of Rupture	11.1	15.5	17.8	10.9	15.6	16.5	19.8	17.5	18.4
Initial Modulus (g/tex)	289	277	321	216	272	271	379	275	315
Uster Evenness Test:									
Non-Uniformity (CV%)	13.98	16.28	18.62	13.04	15.20	17.63	19.02	21.44	23.90
Thin Places/1,000 yds.	4	60	260	2	25	152	168	438	852
Thick Places/1,000 yds	56	126	341	20	105	308	571	1098	1835
Neps/1,000 yds	112	246	815	8	192	885	70	224	824
ASTM Yarn Grade	B+	B	C+	B+	B	B	C	C	C

TABLE V LOT NUMBER 2429 VARIETY Acala 1517 PRODUCTION AREA Tornillo / El Paso

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
			1/8" Gauge Strength	(g/tex)	31.6	Upper Quartile Length (w)	(in)	1.29
Stelometer Strength	(g/tex)	28.39	Elongation	(%)	7.6	Mean Length	(in)	1.06
Elongation	(%)	6.50	Length	(in)	1.23	Percent Short Fibers		6.4
			Uniformity Ratio	(%)	86.3	Diameter	(um)	11.6
2.5% Span Length	(in)	1.207	Micronaire Index		3.8	Neps	(g)	253
Uniformity Ratio	(%)	47.0	Reflectance	(Rd)	76.1	Total Trash	(No./g)	613
			Yellowness	(+b)	10.2	Peyer AL 101		
Micronaire Index		4.03	Color Grade		22	Upper Quartile Length (w)	(in)	1.22
			Leaf Grade		3	Mean Length	(in)	1.02
Shirley Non-Lint Content	(%)	2.13	F/MT Fineness	(mg/tex)	84.0	CV% of Mean		28.7
			F/MT Maturity	(%)	147	Percent Short Fibers		6.2

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	10.10	22.26	31.38	9.96	21.94	29.84	16.18	21.70	29.54
CV% of Yarn Number	.8	.8	.9	.4	.4	.4	3.1	2.9	2.3
Count-Strength-Product	2675	2355	2292	2791	2331	2271	3075	2685	2746
CV% of CSP	2.0	2.0	2.2	1.0	3.2	2.8	2.4	4.0	2.7
Single-Yarn Test:									
Tenacity (g/tex)	16.27	15.18	14.90	16.54	15.20	14.38	19.19	13.37	17.74
Mean Strength (g)	951	403	280	981	409	284	701	364	355
CV% of Break	5.5	6.1	8.2	5.6	8.0	8.8	8.1	10.0	10.0
Elongation (%)	6.97	5.92	5.32	7.35	6.20	5.81	6.36	6.00	5.84
CV% of Elongation	7.0	7.4	11.4	5.2	6.7	7.8	7.7	8.6	7.9
Spec. Work of Rupture (g/tex)	.603	.470	.412	.646	.485	.423	.623	.411	.502
CV% of Work of Rupture	10.8	12.0	17.9	10.0	13.4	15.8	13.8	16.2	17.3
Initial Modulus (g/tex)	194	321	364	211	294	281	331	230	331
Uster Evenness Test:									
Non-Uniformity (CV%)	12.52	14.27	16.14	11.66	13.64	15.78	14.50	16.01	18.43
Thin Places/1,000 yds	0	8	49	0	5	49	14	26	84
Thick Places/1,000 yds	25	75	207	7	44	168	109	270	666
Neps/1,000 yds	41	172	588	8	105	558	59	144	436
ASTM Yarn Grade	B+	B	B	B+	B	B	C	D	C

TABLE V LOT NUMBER 2429 VARIETY Acala 1517 PRODUCTION AREA Tornillo / El Paso

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	28.39	1/8" Gauge Strength	(g/tex)	31.6	Upper Quartile Length (w)	(in)	1.29
Elongation	(%)	6.50	Elongation	(%)	7.6	Mean Length	(in)	1.06
			Length	(in)	1.23	Percent Short Fibers		6.4
2.5% Span Length	(in)	1.207	Uniformity Ratio	(%)	86.3	Diameter	(um)	11.6
Uniformity Ratio	(%)	47.0	Micronaire Index		3.8	Neps	(g)	253
			Reflectance	(Rd)	76.1	Total Trash	(No./g)	613
Micronaire Index		4.03	Yellowness	(+b)	10.2	Peyer AL 101		
			Color Grade		22	Upper Quartile Length (w)	(in)	1.22
			Leaf Grade		3	Mean Length	(in)	1.02
Shirley Non-Lint Content	(%)	2.13	F/MT Fineness	(mg/tex)	84.0	CV% of Mean		28.7
			F/MT Maturity	(%)	147	Percent Short Fibers		6.2

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	10.10	22.26	31.38	9.96	21.94	29.84	16.18	21.70	29.54
CV% of Yarn Number	.8	.8	.9	.4	.4	.4	3.1	2.9	2.3
Count-Strength-Product	2675	2355	2292	2791	2331	2271	3075	2685	2746
CV% of CSP	2.0	2.0	2.2	1.0	3.2	2.8	2.4	4.0	2.7
Single-Yarn Test:									
Tenacity (g/tex)	16.27	15.18	14.90	16.54	15.20	14.38	19.19	13.37	17.74
Mean Strength (g)	951	403	280	981	409	284	701	364	355
CV% of Break	5.5	6.1	8.2	5.6	8.0	8.8	8.1	10.0	10.0
Elongation (%)	6.97	5.92	5.32	7.35	6.20	5.81	6.36	6.00	5.84
CV% of Elongation	7.0	7.4	11.4	5.2	6.7	7.8	7.7	8.6	7.9
Spec. Work of Rupture (g/tex)	.603	.470	.412	.646	.485	.423	.623	.411	.502
CV% of Work of Rupture	10.8	12.0	17.9	10.0	13.4	15.8	13.8	16.2	17.3
Initial Modulus (g/tex)	194	321	364	211	294	281	331	230	331
Uster Evenness Test:									
Non-Uniformity (CV%)	12.52	14.27	16.14	11.66	13.64	15.78	14.50	16.01	18.43
Thin Places/1,000 yds	0	8	49	0	5	49	14	26	84
Thick Places/1,000 yds	25	75	207	7	44	168	109	270	666
Neps/1,000 yds	41	172	588	8	105	558	59	144	436
ASTM Yarn Grade	B+	B	B	B+	B	B	C	D	C

TABLE VI LOT NUMBER 2430 VARIETY DP Acala 90 PRODUCTION AREA Loving, NM / El Paso

FIBER PROPERTIES

Individual Instrument Data		
Stelometer Strength	(g/tex)	25.05
Elongation	(%)	6.83
2.5% Span Length	(in)	1.122
Uniformity Ratio	(%)	44.3
Micronaire Index		3.97
Shirley Non-Lint Content	(%)	2.24

HVI Data		
1/8" Gauge Strength	(g/tex)	29.1
Elongation	(%)	9.3
Length	(in)	1.15
Uniformity Ratio	(%)	81.5
Micronaire Index		3.9
Reflectance	(Rd)	75.7
Yellowness	(+b)	10.3
Color Grade		22
Leaf Grade		5
F/MT Fineness	(mg/tex)	86.3
F/MT Maturity	(%)	147

Uster AFIS		
Upper Quartile Length (w)	(in)	1.19
Mean Length	(in)	.96
Percent Short Fibers		9.1
Diameter	(um)	12.7
Neps	(g)	341
Total Trash	(No./g)	370
Peyer AL 101		
Upper Quartile Length (w)	(in)	1.17
Mean Length	(in)	.96
CV% of Mean		29.7
Percent Short Fibers		8.2

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	9.88	22.52	29.98	9.95	21.97	29.51	15.95	21.19	29.34
CV% of Yarn Number	.8	.8	.9	.3	.4	.6	3.3	3.3	2.6
Count-Strength-Product	2477	2072	1993	2548	2091	1948	2587	2362	2332
CV% of CSP	1.5	2.5	2.8	2.3	1.1	3.0	2.7	3.4	3.9
Single-Yarn Test:									
Tenacity (g/tex)	15.13	13.79	12.74	15.19	13.86	12.92	16.59	15.96	15.45
Mean Strength (g)	904	362	251	902	372	259	615	445	311
CV% of Break	5.4	7.2	8.5	5.3	6.8	7.1	9.1	9.0	11.2
Elongation (%)	7.38	6.20	5.55	7.83	6.73	6.21	6.53	6.59	6.00
CV% of Elongation	6.0	8.0	11.1	5.7	5.2	7.3	9.3	8.1	9.7
Spec. Work of Rupture (g/tex)	.622	.459	.376	.654	.495	.415	.579	.532	.467
CV% of Work of Rupture	10.4	14.5	17.7	10.1	11.3	13.4	16.4	15.0	19.9
Initial Modulus (g/tex)	204	313	324	204	261	256	315	293	303
Uster Evenness Test:									
Non-Uniformity (CV%)	13.15	15.04	16.97	12.10	14.49	16.28	16.44	18.60	21.26
Thin Places/1,000 yds	1	16	103	0	16	80	35	125	323
Thick Places/1,000 yds	38	94	250	8	70	211	259	615	1230
Neps/1,000 yds	44	172	783	4	144	685	35	132	463
ASTM Yarn Grade	B	C+	C+	B+	B	C+	C	D+	C

TABLE VII LOT NUMBER 2446 VARIETY DP-50 PRODUCTION AREA Westbrook / Waco

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	25.48	1/8" Gauge Strength	(g/tex)	24.8	Upper Quartile Length (w)	(in)	1.18
Elongation	(%)	7.17	Elongation	(%)	9.0	Mean Length	(in)	.95
			Length	(in)	1.13	Percent Short Fibers		10.7
2.5% Span Length	(in)	1.098	Uniformity Ratio	(%)	82.2	Diameter	(um)	14.7
Uniformity Ratio	(%)	43.7	Micronaire Index		4.7	Neps	(g)	266
			Reflectance	(Rd)	75.8	Total Trash	(No./g)	361
Micronaire Index		4.87	Yellowness	(+b)	9.5	Peyer AL 101		
			Color Grade		31	Upper Quartile Length (w)	(in)	1.14
Shirley Non-Lint Content	(%)	1.71	Leaf Grade		3	Mean Length	(in)	.93
			F/MT Fineness	(mg/tex)	90.3	CV% of Mean		30.5
			F/MT Maturity	(%)	179	Percent Short Fibers		9.3

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	10.11	22.45	30.02	10.01	21.46	29.28	15.87	21.73	29.86
CV% of Yarn Number	.7	.7	.9	.4	.6	.5	2.1	2.3	2.0
Count-Strength-Product	2229	1757	1580	2284	1793	1590	2176	1955	1952
CV% of CSP	1.7	3.0	3.2	2.6	2.1	2.2	3.4	3.6	3.3
Single-Yarn Test:									
Tenacity (g/tex)	13.42	11.77	10.88	13.65	11.70	11.12	13.82	18.34	12.89
Mean Strength (g)	784	310	214	805	322	224	513	496	255
CV% of Break	6.7	8.1	8.8	5.4	7.9	10.6	11.4	9.2	10.5
Elongation (%)	6.86	5.50	5.00	7.12	5.88	5.40	5.94	6.28	5.44
CV% of Elongation	7.0	9.7	10.8	5.2	7.8	10.1	10.9	8.3	9.3
Spec. Work of Rupture (g/tex)	.515	.351	.293	.547	.374	.315	.441	.566	.355
CV% of Work of Rupture	12.3	16.2	19.3	9.2	14.8	21.0	20.3	15.9	20.1
Initial Modulus (g/tex)	275	309	289	207	222	257	276	270	283
Uster Evenness Test:									
Non-Uniformity (CV%)	13.68	15.69	18.02	12.50	14.82	16.93	18.88	20.88	23.86
Thin Places/1,000 yds	2	40	207	0	22	118	149	369	718
Thick Places/1,000 yds	54	110	305	13	74	251	606	1089	1888
Neps/1,000 yds	48	156	793	2	112	660	82	217	766
ASTM Yarn Grade	B	C+	C+	B+	B	B	C+	D+	C

TABLE VIII LOT NUMBER 2447 VARIETY HS-200 PRODUCTION AREA Terry County / Lubbock

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	26.60	1/8" Gauge Strength	(g/tex)	31.7	Upper Quartile Length (w)	(in)	1.16
Elongation	(%)	7.75	Elongation	(%)	8.6	Mean Length	(in)	.94
			Length	(in)	1.14	Percent Short Fibers		9.2
2.5% Span Length	(in)	1.097	Uniformity Ratio	(%)	82.1	Diameter	(um)	12.1
Uniformity Ratio	(%)	43.0	Micronaire Index		3.0	Neps	(g)	394
			Reflectance	(Rd)	80.1	Total Trash	(No./g)	730
			Yellowness	(+b)	9.3	Peyer AL 101		
Micronaire Index		2.97	Color Grade		11	Upper Quartile Length (w)	(in)	1.13
			Leaf Grade		3	Mean Length	(in)	.93
Shirley Non-Lint Content	(%)	2.35	F/MT Fineness	(mg/tex)	65.4	CV% of Mean		30.1
			F/MT Maturity	(%)	136	Percent Short Fibers		9.7

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	9.91	21.96	30.18	10.01	21.96	30.63	16.15	22.13	29.81
CV% of Yarn Number	.6	.8	.9	.4	.7	.4	3.8	3.7	3.4
Count-Strength-Product	2579	2204	2075	2641	2219	2137	2669	2364	2388
CV% of CSP	2.0	2.0	3.1	1.4	3.1	2.2	2.7	3.5	3.6
Single-Yarn Test:									
Tenacity (g/tex)	15.56	14.83	14.12	16.35	14.23	13.99	17.44	16.56	15.88
Mean Strength (g)	927	399	276	964	383	270	638	443	315
CV% of Break	5.5	5.9	8.0	5.7	7.2	7.8	10.1	9.7	10.1
Elongation (%)	7.36	6.57	5.97	8.02	6.61	6.23	6.63	6.35	6.04
CV% of Elongation	6.9	9.3	8.3	5.5	5.5	7.0	9.5	8.8	8.6
Spec. Work of Rupture (g/tex)	.629	.521	.438	.699	.499	.444	.610	.533	.474
CV% of Work of Rupture	11.0	12.4	15.4	10.2	12.0	13.8	16.8	16.1	18.0
Initial Modulus (g/tex)	205	261	304	202	223	271	325	270	308
Uster Evenness Test:									
Non-Uniformity (CV%)	12.86	14.36	16.39	11.58	14.44	15.31	16.81	18.46	21.42
Thin Places/1,000 yds	0	8	64	0	11	35	46	122	379
Thick Places/1,000 yds	36	64	175	3	52	116	293	554	1236
Neps/1,000 yds	44	106	584	3	61	370	38	81	444
ASTM Yarn Grade	B+	B	B	B+	B	B	C	D	C

TABLE IX LOT NUMBER 2448 VARIETY HS-26 PRODUCTION AREA Terry County / Lubbock

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	25.61	1/8" Gauge Strength	(g/tex)	30.7	Upper Quartile Length (w)	(in)	1.09
Elongation	(%)	8.33	Elongation	(%)	9.9	Mean Length	(in)	.91
			Length	(in)	1.07	Percent Short Fibers		8.4
2.5% Span Length	(in)	1.042	Uniformity Ratio	(%)	82.4	Diameter	(um)	13.9
Uniformity Ratio	(%)	48.8	Micronaire Index		3.9	Neps	(g)	288
			Reflectance	(Rd)	76.8	Total Trash	(No./g)	766
			Yellowness	(+b)	9.9	Peyer AL 101		
Micronaire Index		4.00	Color Grade		21	Upper Quartile Length (w)	(in)	1.07
			Leaf Grade		4	Mean Length	(in)	.90
Shirley Non-Lint Content	(%)	2.77	F/MT Fineness	(mg/tex)	80.4	CV% of Mean		25.2
			F/MT Maturity	(%)	158	Percent Short Fibers		6.1

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	9.85	21.80	31.06	10.02	21.91	30.66	15.87	21.71	29.73
CV% of Yarn Number	.6	.7	.7	.4	.4	.8	3.2	2.5	2.0
Count-Strength-Product	2361	1932	1781	2489	1984	1905	2365	2137	2157
CV% of CSP	2.1	2.8	3.5	1.5	2.7	2.3	1.8	3.5	2.7
Single-Yarn Test:									
Tenacity (g/tex)	14.32	12.94	12.22	14.65	13.17	12.47	15.37	14.57	14.09
Mean Strength (g)	858	351	232	865	355	240	573	397	280
CV% of Break	5.2	7.7	9.0	5.6	8.5	9.8	10.4	9.9	10.3
Elongation (%)	7.84	6.51	5.83	8.11	6.96	6.34	7.08	6.85	6.36
CV% of Elongation	6.5	9.1	10.5	5.7	7.1	8.5	10.1	7.5	8.0
Spec. Work of Rupture (g/tex)	.620	.463	.381	.654	.495	.417	.582	.512	.456
CV% of Work of Rupture	10.0	15.5	17.8	10.3	14.9	17.7	17.4	15.8	17.8
Initial Modulus (g/tex)	240	292	289	190	232	237	266	250	258
Uster Evenness Test:									
Non-Uniformity (CV%)	13.26	15.43	17.95	12.08	14.41	16.31	17.20	18.63	21.32
Thin Places/1,000 yds	2	37	190	0	13	86	94	174	398
Thick Places/1,000 yds	36	93	278	6	64	165	264	498	1138
Neps/1,000 yds	25	109	593	1	57	444	37	59	320
ASTM Yarn Grade	B+	B	B	B+	B	B	C+	C	C+

TABLE X LOT NUMBER 2449 VARIETY HS-26 PRODUCTION AREA Miles Co-op / Abilene

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	25.97	1/8" Gauge Strength	(g/tex)	29.2	Upper Quartile Length (w)	(in)	1.10
Elongation	(%)	7.25	Elongation	(%)	9.8	Mean Length	(in)	.92
			Length	(in)	1.07	Percent Short Fibers		8.1
2.5% Span Length	(in)	1.010	Uniformity Ratio	(%)	82.1	Diameter	(um)	13.4
Uniformity Ratio	(%)	44.5	Micronaire Index		3.8	Neps	(g)	333
			Reflectance	(Rd)	74.5	Total Trash	(No./g)	473
Micronaire Index		3.90	Yellowness	(+b)	10.3	Peyer AL 101		
			Color Grade		22	Upper Quartile Length (w)	(in)	1.03
Shirley Non-Lint Content	(%)	2.31	Leaf Grade		4	Mean Length	(in)	.83
			F/MT Fineness	(mg/tex)	79.6	CV% of Mean		32.6
			F/MT Maturity	(%)	156	Percent Short Fibers		13.6

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	9.95	22.11	29.89	10.08	22.45	30.85	16.77	22.44	29.17
CV% of Yarn Number	.7	.5	.6	.4	.4	1.0	1.8	2.2	2.7
Count-Strength-Product	2455	1974	1870	2504	2073	2005	2430	2160	2256
CV% of CSP	1.0	1.8	2.3	1.4	3.9	2.5	3.2	3.4	3.2
Single-Yarn Test:									
Tenacity (g/tex)	14.63	14.00	13.13	14.95	13.53	13.22	15.81	15.14	14.63
Mean Strength (g)	868	374	259	876	356	253	557	399	297
CV% of Break	5.8	6.7	7.9	6.1	8.0	9.4	10.4	10.7	12.7
Elongation (%)	7.16	6.34	5.54	7.35	6.53	6.01	5.79	5.96	5.81
CV% of Elongation	6.3	7.0	11.2	6.1	6.8	8.8	11.0	9.8	11.3
Spec. Work of Rupture (g/tex)	.582	.480	.387	.609	.465	.416	.500	.466	.430
CV% of Work of Rupture	10.6	12.2	17.1	11.3	14.2	17.1	18.2	17.1	21.8
Initial Modulus (g/tex)	273	249	309	220	267	268	392	248	291
Uster Evenness Test:									
Non-Uniformity (CV%)	13.26	15.19	17.07	12.24	14.98	16.17	19.10	19.73	22.19
Thin Places/1,000 yds	1	26	114	0	19	66	471	270	547
Thick Places/1,000 yds	38	84	230	10	74	158	544	654	1260
Neps/1,000 yds	28	116	486	4	60	368	58	82	350
ASTM Yarn Grade	B+	B	B	B+	B	B	C	C	C+

TABLE XI LOT NUMBER 2450 VARIETY PM-145 PRODUCTION AREA Terry County / Lubbock

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	25.27	1/8" Gauge Strength	(g/tex)	25.2	Upper Quartile Length (w)	(in)	1.09
Elongation	(%)	7.42	Elongation	(%)	9.1	Mean Length	(in)	.90
			Length	(in)	1.03	Percent Short Fibers		8.9
2.5% Span Length	(in)	1.025	Uniformity Ratio	(%)	79.2	Diameter	(um)	12.3
Uniformity Ratio	(%)	44.9	Micronaire Index		2.4	Neps	(g)	513
			Reflectance	(Rd)	77.8	Total Trash	(No./g)	1585
Micronaire Index		2.70	Yellowness	(+b)	8.9	Peyer AL 101		
			Color Grade		21	Upper Quartile Length (w)	(in)	1.02
Shirley Non-Lint Content	(%)	3.45	Leaf Grade		4	Mean Length	(in)	.82
			F/MT Fineness	(mg/tex)	56.7	CV% of Mean		34.1
			F/MT Maturity	(%)	116	Percent Short Fibers		16.2

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	9.95	21.98	29.65	9.98	21.84	30.58	16.06	22.13	29.50
CV% of Yarn Number	.9	.7	.9	.2	.4	.5	3.6	3.9	3.2
Count-Strength-Product	2477	1989	1892	2462	2028	1992	2255	2001	2081
CV% of CSP	2.2	1.6	1.9	2.5	1.8	1.6	5.7	4.1	4.3
Single-Yarn Test:									
Tenacity (g/tex)	14.27	13.53	13.23	14.92	13.12	12.79	15.55	14.79	13.97
Mean Strength (g)	847	364	264	883	355	247	573	395	280
CV% of Break	5.5	7.2	6.5	6.0	7.5	7.3	11.7	11.4	14.0
Elongation (%)	7.81	6.91	6.40	8.51	7.02	6.49	6.99	6.84	6.18
CV% of Elongation	6.2	8.6	11.0	6.2	7.5	7.2	10.1	9.5	11.1
Spec. Work of Rupture (g/tex)	.631	.513	.457	.697	.499	.438	.585	.525	.445
CV% of Work of Rupture	10.6	14.6	15.7	11.2	14.5	14.2	18.4	17.9	23.9
Initial Modulus (g/tex)	217	266	291	181	222	263	314	255	284
Uster Evenness Test:									
Non-Uniformity (CV%)	13.29	14.68	16.78	11.85	14.82	15.47	18.23	20.40	22.75
Thin Places/1,000 yds	1	9	74	0	14	38	143	341	682
Thick Places/1,000 yds	53	67	215	4	62	113	376	822	1433
Neps/1,000 yds	61	134	689	3	68	472	59	145	495
ASTM Yarn Grade	B	B	C+	B+	C+	C+	C	D	C

TABLE XII LOT NUMBER 2451 VARIETY PM-200 PRODUCTION AREA O'Donnell / Lamesa

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	24.45	1/8" Gauge Strength	(g/tex)	26.7	Upper Quartile Length (w)	(in)	1.07
Elongation	(%)	7.42	Elongation	(%)	9.5	Mean Length	(in)	.87
			Length	(in)	1.06	Percent Short Fibers		11.9
2.5% Span Length	(in)	1.033	Uniformity Ratio	(%)	79.7	Diameter	(um)	12.8
Uniformity Ratio	(%)	45.5	Micronaire Index		3.0	Neps	(g)	476
			Reflectance	(Rd)	81.5	Total Trash	(No./g)	374
Micronaire Index		3.07	Yellowness	(+b)	9.6	Peyer AL 101		
			Color Grade		11	Upper Quartile Length (w)	(in)	1.04
			Leaf Grade		1	Mean Length	(in)	.84
Shirley Non-Lint Content	(%)	1.75	F/MT Fineness	(mg/tex)	72.7	CV% of Mean		31.7
			F/MT Maturity	(%)	128	Percent Short Fibers		13.1

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	10.00	22.09	29.77	10.01	22.02	29.97	16.66	22.23	29.82
CV% of Yarn Number	.8	.4	.9	.4	.7	.5	2.7	2.9	3.1
Count-Strength-Product	2299	1974	1840	2476	2154	1929	2338	2027	2051
CV% of CSP	2.1	3.0	4.8	1.1	1.7	1.5	2.7	4.1	4.0
Single-Yarn Test:									
Tenacity (g/tex)	13.94	13.47	12.80	14.70	13.61	13.04	15.09	14.50	13.49
Mean Strength (g)	824	360	254	867	365	257	535	386	267
CV% of Break	6.0	7.7	8.3	4.6	7.2	8.0	10.4	11.9	12.5
Elongation (%)	7.57	6.82	6.29	8.38	7.13	6.68	6.13	6.45	5.89
CV% of Elongation	6.6	7.9	8.8	4.6	5.8	7.7	9.9	9.7	10.0
Spec. Work of Rupture (g/tex)	.595	.496	.428	.669	.519	.458	.505	.481	.403
CV% of Work of Rupture	11.1	14.0	16.6	8.3	12.4	15.1	16.3	19.1	20.5
Initial Modulus (g/tex)	246	251	270	183	240	234	348	249	282
Uster Evenness Test:									
Non-Uniformity (CV%)	13.12	14.48	16.22	11.56	13.83	15.25	18.93	20.95	23.64
Thin Places/1,000 yds	1	7	55	0	5	31	197	444	818
Thick Places/1,000 yds	33	59	150	3	34	96	512	935	1645
Neps/1,000 yds	32	93	475	0	54	357	39	110	442
ASTM Yarn Grade	B+	B	B	B+	B	C+	C	D	C

TABLE XIII LOT NUMBER 2452 VARIETY HS-26 PRODUCTION AREA O'Donnell / Lamesa

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	25.09	1/8" Gauge Strength	(g/tex)	29.3	Upper Quartile Length (w)	(in)	1.09
Elongation	(%)	8.00	Elongation	(%)	9.6	Mean Length	(in)	0.90
			Length	(in)	1.07	Percent Short Fibers		9.4
2.5% Span Length	(in)	1.038	Uniformity Ratio	(%)	81.8	Diameter	(um)	13.3
Uniformity Ratio	(%)	46.9	Micronaire Index		3.3	Neps	(g)	375
			Reflectance	(Rd)	80.4	Total Trash	(No./g)	621
Micronaire Index		3.40	Yellowness	(+b)	9.0	Peyer AL 101		
			Color Grade		11	Upper Quartile Length (w)	(in)	1.06
Shirley Non-Lint Content	(%)	2.38	Leaf Grade		3	Mean Length	(in)	.87
			F/MT Fineness	(mg/tex)	70.6	CV% of Mean		29.6
			F/MT Maturity	(%)	147	Percent Short Fibers		10.7

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	10.04	22.17	29.83	10.03	21.82	29.26	16.17	22.08	29.23
CV% of Yarn Number	.7	.6	.6	.4	.4	.4	3.1	3.0	2.7
Count-Strength-Product	2334	1931	1823	2472	2007	1794	2353	2061	2192
CV% of CSP	1.8	2.6	2.2	1.5	1.8	3.2	4.7	4.8	2.1
Single-Yarn Test:									
Tenacity (g/tex)	14.14	12.83	11.99	14.58	13.23	11.92	15.56	14.64	13.92
Mean Strength (g)	845	342	237	860	358	241	569	392	282
CV% of Break	5.9	12.3	8.1	6.1	11.4	9.3	10.6	11.0	13.0
Elongation (%)	7.91	6.55	5.98	8.28	7.16	6.42	7.20	6.85	6.18
CV% of Elongation	6.0	13.4	11.2	5.4	6.6	7.9	8.9	9.3	11.1
Spec. Work of Rupture (g/tex)	.625	.466	.381	.658	.502	.402	.592	.514	.433
CV% of Work of Rupture	10.3	18.6	17.8	10.2	15.6	17.0	16.9	17.6	23.0
Initial Modulus (g/tex)	257	278	281	189	245	263	255	265	272
Uster Evenness Test:									
Non-Uniformity (CV%)	13.10	14.88	16.85	11.94	14.22	15.81	17.69	18.90	21.50
Thin Places/1,000 yds	2	20	113	0	13	68	127	193	441
Thick Places/1,000 yds	36	63	205	7	48	132	312	520	1152
Neps/1,000 yds	27	92	527	1	60	396	26	46	279
ASTM Yarn Grade	B	C+	B	B+	B	B	C	D	B

TABLE XIV LOT NUMBER 2453 VARIETY PM-145 PRODUCTION AREA O'Donnell / Lamesa

FIBER PROPERTIES

Individual Instrument Data			HM Data			Uster AFIS		
			1/8" Gauge Strength	(g/tex)	21.4	Upper Quartile Length (w)	(in)	.98
Stelometer Strength	(g/tex)	23.60	Elongation	(%)	9.2	Mean Length	(in)	.81
Elongation	(%)	6.83	Length	(in)	.96	Percent Short Fibers		11.8
			Uniformity Ratio	(%)	80.1	Diameter	(um)	13.5
2.5% Span Length	(in)	.950	Micronaire Index		3.2	Neps	(g)	441
Uniformity Ratio	(%)	46.7	Reflectance	(Rd)	79.2	Total Trash	(No./g)	543
			Yellowness	(+b)	9.3	Peyer AL 101		
Micronaire Index		3.20	Color Grade		21	Upper Quartile Length (w)	(in)	.97
			Leaf Grade		2	Mean Length	(in)	.79
Shirley Non-Lint Content	(%)	2.04	F/MT Fineness	(mg/tex)	74.2	CV% of Mean		32.1
			F/MT Maturity	(%)	132	Percent Short Fibers		14.9

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	9.99	22.15	29.94	10.18	22.53	31.28	16.25	22.17	29.05
CV% of Yarn Number	.7	.6	1.2	.4	.5	.6	3.4	3.2	2.8
Count-Strength-Product	2225	1733	1667	2241	1880	1778	2044	1821	1845
CV% of CSP	2.5	3.7	3.9	1.6	3.1	2.7	3.2	3.6	2.5
Single-Yarn Test:									
Tenacity (g/tex)	12.88	12.19	11.74	13.42	12.20	11.72	13.74	13.77	12.45
Mean Strength (g)	761	325	232	778	320	221	500	359	253
CV% of Break	6.1	6.9	8.8	6.0	7.8	9.2	11.6	11.6	14.0
Elongation (%)	7.03	6.14	5.51	7.51	6.32	5.74	6.27	6.31	5.65
CV% of Elongation	7.3	9.2	12.0	6.1	7.7	9.2	9.0	8.6	10.4
Spec. Work of Rupture (g/tex)	.518	.412	.351	.566	.416	.363	.460	.447	.360
CV% of Work of Rupture	12.6	14.7	17.8	11.0	14.2	17.2	17.9	18.4	23.5
Initial Modulus (g/tex)	253	243	294	193	250	269	297	264	270
Uster Evenness Test:									
Non-Uniformity (CV%)	13.54	15.24	16.92	12.45	15.17	16.28	19.44	20.98	23.37
Thin Places/1,000 yds	2	23	99	0	15	60	264	442	818
Thick Places/1,000 yds	54	87	214	10	73	152	464	822	1470
Neps/1,000 yds	42	123	608	3	86	438	44	98	368
ASTM Yarn Grade	B	B	B	B+	C+	B	C	D	C

TABLE XV LOT NUMBER 2454 VARIETY DP Acala 90 PRODUCTION AREA Miles Co-op / Abilene

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	26.25	1/8" Gauge Strength	(g/tex)	28.6	Upper Quartile Length (w)	(in)	1.01
Elongation	(%)	6.33	Elongation	(%)	7.3	Mean Length	(in)	.83
			Length	(in)	1.03	Percent Short Fibers		12.1
2.5% Span Length	(in)	.995	Uniformity Ratio	(%)	81.0	Diameter	(um)	13.6
Uniformity Ratio	(%)	45.1	Micronaire Index		4.3	Neps	(g)	334
			Reflectance	(Rd)	73.3	Total Trash	(No./g)	591
Micronaire Index		4.40	Yellowness	(+b)	10.7	Peyer AL 101		
			Color Grade		32	Upper Quartile Length (w)	(in)	1.01
			Leaf Grade		3	Mean Length	(in)	.83
Shirley Non-Lint Content	(%)	2.68	F/MT Fineness	(mg/tex)	89.5	CV% of Mean		30.9
			F/MT Maturity	(%)	159	Percent Short Fibers		12.3

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	9.97	22.11	29.64	10.07	22.04	30.01	15.95	21.53	29.47
CV% of Yarn Number	1.3	.8	.7	.3	.5	.4	2.1	3.0	2.9
Count-Strength-Product	2376	1974	1807	2465	2000	1876	2327	2013	2083
CV% of CSP	2.5	3.4	3.3	2.4	2.9	2.5	1.6	3.7	2.2
Single-Yarn Test:									
Tenacity (g/tex)	14.20	13.34	13.03	14.68	13.63	12.80	15.56	14.62	13.39
Mean Strength (g)	841	356	260	862	365	252	576	401	269
CV% of Break	6.9	7.3	8.9	5.8	7.8	9.2	12.2	11.1	15.3
Elongation (%)	6.46	5.45	5.07	6.94	6.02	5.33	5.49	5.26	4.90
CV% of Elongation	6.6	7.9	11.8	5.1	6.3	7.7	8.9	10.5	11.6
Spec. Work of Rupture (g/tex)	.508	.394	.345	.557	.430	.349	.453	.403	.333
CV% of Work of Rupture	12.4	13.6	17.8	9.8	13.3	15.8	18.2	18.4	24.5
Initial Modulus (g/tex)	301	293	317	208	251	260	333	304	321
Uster Evenness Test:									
Non-Uniformity (CV%)	13.81	15.50	17.83	12.68	14.77	16.74	19.97	22.04	24.09
Thin Places/1,000 yds	8	31	155	1	14	83	295	602	914
Thick Places/1,000 yds	49	88	278	10	84	230	602	999	1645
Neps/1,000 yds	52	188	628	4	107	622	72	164	506
ASTM Yarn Grade	B+	B	B	B	B	B	C	C	C+

TABLE XVI LOT NUMBER 2455 VARIETY DPL-50 PRODUCTION AREA Moreman / Corpus Christi

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	25.10	1/8" Gauge Strength	(g/tex)	23.9	Upper Quartile Length (w)	(in)	1.17
Elongation	(%)	6.75	Elongation	(%)	8.7	Mean Length	(in)	.94
			Length	(in)	1.14	Percent Short Fibers		10.1
2.5% Span Length	(in)	1.108	Uniformity Ratio	(%)	82.6	Diameter	(um)	14.4
Uniformity Ratio	(%)	44.1	Micronaire Index		4.6	Neps	(g)	405
			Reflectance	(Rd)	72.4	Total Trash	(No./g)	369
Micronaire Index		4.83	Yellowness	(+b)	10.1	Peyer AL 101		
			Color Grade		32	Upper Quartile Length (w)	(in)	1.14
Shirley Non-Lint Content	(%)	2.80	Leaf Grade		3	Mean Length	(in)	.93
			F/MT Fineness	(mg/tex)	90.2	CV% of Mean		30.3
			F/MT Maturity	(%)	172	Percent Short Fibers		9.4

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	10.02	22.11	30.29	9.98	21.95	29.81	16.37	21.99	30.65
CV% of Yarn Number	.8	.9	1.1	.4	.6	.5	2.5	3.1	3.5
Count-Strength-Product	2247	1812	1591	2312	1768	1665	2171	1943	1903
CV% of CSP	2.7	3.4	3.8	2.6	2.1	2.7	2.7	3.2	3.7
Single-Yarn Test:									
Tenacity (g/tex)	13.29	12.31	11.70	13.30	12.04	12.11	14.07	13.84	12.58
Mean Strength (g)	784	329	228	787	324	240	508	372	243
CV% of Break	5.8	7.6	9.5	6.0	7.2	9.5	10.7	10.9	11.7
Elongation (%)	6.50	5.53	4.63	6.64	5.61	5.34	5.24	5.43	4.81
CV% of Elongation	6.9	9.2	14.1	6.1	7.4	9.1	10.0	10.4	10.0
Spec. Work of Rupture (g/tex)	.493	.376	.291	.499	.362	.339	.399	.392	.309
CV% of Work of Rupture	11.1	14.2	21.7	11.1	13.6	16.9	17.9	18.7	20.0
Initial Modulus (g/tex)	289	272	336	210	238	271	323	277	316
Uster Evenness Test:									
Non-Uniformity (CV%)	13.95	15.66	18.06	12.77	15.30	17.18	18.89	19.84	23.80
Thin Places/1,000 yds	4	31	195	1	31	140	164	253	714
Thick Places/1,000 yds	53	118	329	12	101	257	594	860	1856
Neps/1,000 yds	120	230	811	8	131	773	113	170	779
ASTM Yarn Grade	B+	B+	B	B+	B	B	C	D	B

TABLE XVII LOT NUMBER 2474 VARIETY HS-26 PRODUCTION AREA Dill City / Altus, Oklahoma

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
Stelometer Strength	(g/tex)	26.53	1/8" Gauge Strength	(g/tex)	30.3	Upper Quartile Length (w)	(in)	1.06
Elongation	(%)	7.67	Elongation	(%)	9.5	Mean Length	(in)	.89
			Length	(in)	1.05	Percent Short Fibers		8.8
2.5% Span Length	(in)	1.035	Uniformity Ratio	(%)	84.4	Diameter	(um)	14.4
Uniformity Ratio	(%)	47.7	Micronaire Index		4.9	Neps	(g)	274
			Reflectance	(Rd)	72.7	Total Trash	(No./g)	254
Micronaire Index		5.23	Yellowness	(+b)	8.4	Peyer AL 101		
			Color Grade		41	Upper Quartile Length (w)	(in)	1.01
Shirley Non-Lint Content	(%)	2.37	Leaf Grade		5	Mean Length	(in)	.84
			F/MT Fineness	(mg/tex)	93.5	CV% of Mean		27.0
			F/MT Maturity	(%)	181	Percent Short Fibers		9.7

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	10.15	21.34	28.89	10.00	21.49	29.60	15.76	22.43	30.21
CV% of Yarn Number	.7	.8	.8	.3	.4	.4	2.3	2.8	3.3
Count-Strength-Product	2452	1885	1718	2508	1946	1767	2463	2220	2226
CV% of CSP	1.3	2.1	3.8	1.1	3.0	2.5	1.9	2.3	3.1
Single-Yarn Test:									
Tenacity (g/tex)	14.66	12.62	11.95	14.95	12.87	12.12	15.79	14.84	13.81
Mean Strength (g)	853	349	244	884	354	242	592	391	270
CV% of Break	6.8	9.5	9.8	6.0	8.4	8.9	10.7	12.3	13.2
Elongation (%)	6.88	5.74	5.27	7.33	6.10	5.59	5.80	6.01	5.46
CV% of Elongation	7.0	10.1	10.5	5.6	6.8	8.1	9.5	10.1	10.5
Spec. Work of Rupture (g/tex)	.558	.392	.334	.604	.420	.351	.496	.460	.385
CV% of Work of Rupture	12.4	18.2	19.9	10.5	14.1	16.0	17.6	20.3	21.7
Initial Modulus (g/tex)	289	293	309	212	256	263	337	258	298
Uster Evenness Test:									
Non-Uniformity (CV%)	13.93	16.21	18.83	12.78	15.37	17.51	17.36	19.16	21.86
Thin Places/1,000 yds	4	62	320	1	31	171	89	192	487
Thick Places/1,000 yds	49	130	358	15	112	288	282	573	1202
Neps/1,000 yds	37	152	687	4	120	593	32	85	298
ASTM Yarn Grade	B	B	B	B+	B	B	B	C	B

TABLE XVIII LOT NUMBER 2475 VARIETY HS-200 PRODUCTION AREA Dill City / Altus, Oklahoma

FIBER PROPERTIES

Individual Instrument Data			HVI Data			Uster AFIS		
			1/8" Gauge Strength	(g/tex)	23.2	Upper Quartile Length (w)	(in)	1.08
Stelometer Strength	(g/tex)	24.79	Elongation	(%)	8.9	Mean Length	(in)	.89
Elongation	(%)	7.67	Length	(in)	1.06	Percent Short Fibers		9.5
			Uniformity Ratio	(%)	81.4	Diameter	(um)	13.0
2.5% Span Length	(in)	1.022	Micronaire Index		3.9	Neps	(g)	336
Uniformity Ratio	(%)	47.0	Reflectance	(Rd)	74.6	Total Trash	(No./g)	638
			Yellowness	(+b)	9.4	Peyer AL 101		
Micronaire Index		3.67	Color Grade		31	Upper Quartile Length (w)	(in)	1.09
			Leaf Grade		4	Mean Length	(in)	.90
Shirley Non-Lint Content	(%)	3.24	F/MT Fineness	(mg/tex)	79.9	CV% of Mean		29.3
			F/MT Maturity	(%)	162	Percent Short Fibers		9.1

YARN PROPERTIES

Spinning Machine:	Rieter m1/1			Schlafhorst Autocoro			Saco Lowell SF-3H Ring		
Nominal Yarn Number (N_e)	10/1	22/1	30/1	10/1	22/1	30/1	16/1	22/1	30/1
Nominal Twist Multiplier	4.8	4.8	4.8	4.8	4.8	4.8	4.0	4.0	4.0
Skein Test:									
Yarn Number (N_e)	9.93	21.91	30.47	10.01	21.94	29.77	16.21	21.58	30.01
CV% of Yarn Number	.9	.6	1.1	.3	.4	.8	2.1	2.6	2.8
Count-Strength-Product	2293	1883	1800	2394	1974	1871	2359	2068	2089
CV% of CSP	2.0	2.7	4.2	1.6	2.3	1.8	3.7	1.8	3.4
Single-Yarn Test:									
Tenacity (g/tex)	13.83	12.29	12.25	14.38	12.79	12.03	15.15	14.75	13.53
Mean Strength (g)	822	331	238	849	344	239	552	404	266
CV% of Break	5.8	7.6	8.9	6.4	7.3	8.7	10.2	10.7	10.5
Elongation (%)	7.55	6.33	5.75	7.93	6.67	6.21	6.08	6.46	5.83
CV% of Elongation	6.6	8.0	9.0	6.2	6.5	9.3	9.7	9.3	9.7
Spec. Work of Rupture (g/tex)	.591	.420	.383	.635	.465	.399	.505	.495	.408
CV% of Work of Rupture	10.8	14.0	16.7	11.3	12.9	17.3	17.1	17.1	19.0
Initial Modulus (g/tex)	247	307	307	209	225	252	343	254	292
Uster Evenness Test:									
Non-Uniformity (CV%)	13.17	15.09	17.20	11.96	14.09	15.74	17.46	18.77	21.48
Thin Places/1,000 yds	0	22	120	0	6	58	99	183	420
Thick Places/1,000 yds	40	88	232	4	48	122	325	557	1187
Neps/1,000 yds	38	116	590	4	73	444	47	90	390
ASTM Yarn Grade	B+	C+	B	B+	C+	C+	C+	C	C+