



TEXTILE TOPICS

TEXTILE RESEARCH CENTER • TEXAS TECH UNIVERSITY • LUBBOCK, TEXAS • USA

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ADDRESS NOTICE We would like to call attention to the correct mailing address of the Textile Research Center. We have had to change our address twice during the past ten years, and some of our readers are still using the old ones. Not only does this delay our receiving correspondence, but the United States post office is beginning to complain.

Our correct mailing address is:

P. O. Box 5888
Lubbock, Texas 79417-5888
U. S. A.

Please direct all correspondence to this address. This will be helpful in making quicker responses to your inquiries.

1985 TEXAS COTTON QUALITY REPORT In the January 1986 issue of *Textile Topics* (Vol. XIV, No. 5), we carried an article about a report on the quality of the 1985 Texas cotton crop and mentioned that it is available to interested persons. This contains evaluation data of sixteen cottons obtained from major production areas in the state. Some 250 copies of the report have already been distributed.

We believe it might be of value to include in this issue of *Topics* a sample of the information in the report. On the following page we are reproducing a table giving a description of one cotton that was included, along with spinning details and yarn test results. The other fifteen cottons are also representative of their production areas and are available in commercial quantities. They have varying fiber properties with strengths ranging from around 22 grams/tex up to nearly 30, and lengths from 15/16 inch to 1-1/3 inch.

We have had an inquiry about spinning specifications that were not included in the crop report, especially details of the two open-end machines. Therefore, we are including this information in the table on page 3. It will be seen that we did not operate the Rieter and Schlafhorst machines at the same speed. The rotor speed employed on the Rieter was 55,000 rpm to facilitate a comparison between the yarns spun from this year's cotton and those produced in previous years on the same machine. The Schlafhorst was operated approximately 45% faster than the Rieter, but the Rieter can be run at higher speeds than was used in this study. We emphasize that these specifications may not be considered optimized, but the conditions were held constant to give a comparison of the different cottons. Obviously, a textile manufacturer would set his machines to give the highest production and efficiency for the fiber being processed.

We hope the additional information we are giving will be of interest to our readers. We repeat that the full report can be obtained by writing the Textile Research Center at the address given on the back page of *Textile Topics*.

SUMMER WORK SCHEDULE Texas Tech University and all other state agencies are making plans to conserve energy during the coming summer. Part of this program will be to work four 10-hour days per week instead of the normal five so that air conditioning and other operating costs can be reduced. This schedule will begin on Monday, June 2, and will continue through August. We do not feel this will interfere with any of the Textile Research Center activities or contacts with our sponsors, as we plan to

FIBER PROPERTIES

Individual Instrument Data			HVI Data: MCI 3000			HVI Data: Spinlab 800		
Stelometer Strength	27.6	g/tex	1/8" Gge Strength	28.75	g/tex	1/8" Gge Strength	29.7	g/tex
Elongation	5.07	%	Elongation	5.28	%	Elongation	5.5	%
2.5% Span Length	1.053	in.	Length	1.078	in.	Length	1.11	in.
Uniformity Ratio	46.7	%	Uniformity Ratio	84.0	%	Uniformity Ratio	81	%
Short Fiber Content	1.95	%	Micronaire Value	4.15		Micronaire Value	4.3	
Micronaire Value	4.23		Reflectance	72.3		Reflectance	71.8	
Pressley Strength	98.8	Mpsi	Yellowness	9.3		Yellowness	9.7	
Shirley Non-lint Cont.	5.57	%	Index of-Color	41-3	-Leaf 60	Index of-Color	32-2	-Leaf -
IIC/Shirley F/MT	Micronaire: 4.5		Fineness:	201	mtex	Percent Mature Fibers:	75.8	
Peyer Texlab AL-101	Upper Quartile Len.:	1.15	Mean Len.:	0.96	CV% of Mean:	32.1	% Short Fibers:	5.9

YARN PROPERTIES

Spinning Machine	Rieter ml/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 (α _e)	4.85	4.81	4.78	4.78	4.79	4.79	4.0	4.0	4.0
Skein Test:									
Yarn Number (N _e)	10.03	21.76	30.02	10.15	22.31	30.00	16.11	22.08	29.56
CV% of Yarn Number	0.7	1.2	1.3	0.6	1.5	1.9	1.9	2.2	1.8
Count-Strength-Product	2600	2198	2019	2542	2038	1806	2590	2299	2316
CV% of CSP	2.1	4.0	2.9	0.9	3.6	2.6	3.2	5.0	3.4
Single-Yarn Strength Test:									
Tenacity (g/tex)	16.64	15.47	14.10	15.86	14.78	14.00	17.62	17.69	16.99
Mean Strength (g)	980	420	277	922	391	276	646	474	340
CV% of Break	6.9	9.2	10.5	8.0	9.9	10.1	12.2	14.2	12.0
Elongation (%)	6.47	5.66	5.03	6.45	5.22	4.68	5.47	5.84	5.25
CV% of Elongation	5.9	8.1	9.3	6.1	8.8	12.1	9.4	11.4	9.7
Spec. Work of Rupture (g/tex)	0.572	0.463	0.377	0.546	0.422	0.359	0.499	0.504	0.444
CV% of Work of Rupture	11.1	15.8	18.5	12.4	16.0	18.8	18.5	21.2	17.7
Initial Modulus (g/tex)	364	417	462	320	415	508	388	361	411
Uster Evenness Test:									
Non-Uniformity (CV%)	15.16	15.64	18.49	13.87	16.34	18.56	19.01	20.79	23.11
Thin Places/1,000 yds	5	30	175	3	61	225	143	311	570
Thick Places/1,000 yds	113	119	409	26	142	303	464	824	1379
Neps/1,000 yds	167	168	840	12	82	462	146	242	634
Hair Count/100 yds	286	122	99	360	171	109	1306	1167	1475
ASTM Yarn Grade	D	C	D+	A	A	C	A	C	D

TABLE I
SPINNING SPECIFICATIONS

(a) ROTOR SPINNING

Sliver	55 gr/yd Finisher Drawframe					
Spinning Specifications:						
Machine	Rieter m1/1			Schlafhorst Autocoro		
Nominal Yarn Number (N_e)	10	22	30	10	22	30
Rotor Type	45 N St			T40		
Rotor Speed (rpm)	55,000			80,000		
Opening Roller Type	T.52			OB20		
Opening Roller Speed (rpm)	6700			7500		
Draft (approximate)	66	145	198	66	145	198
Twist Multiplier	4.85	4.80	4.78	4.78	4.79	4.79
Yarn Speed (yd/min)	99.5	67.7	58.3	147.0	98.9	84.6
Navel	Smooth Steel			4-grooved Ceramic		

(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	4.00

maintain mail service and correspondence as usual. The four 10-hour days will be Monday through Thursday. So, if you should call on Friday and not get an answer, please call again on Monday.

It may be of interest to know that for many years the Textile Research Center has been open from 6.00 a.m. to 5:00 p.m. Monday through Friday. There are several reasons for this, but the main one is that we want to stay on a schedule that is convenient for the research sponsors we have in the Eastern time zone of the United States. Lubbock is located on the Western edge of the Central time zone, which gives a one-hour difference in the standard time between the two locations.

DEUTSCHE WOCHE We are always pleased to have visitors, and occasionally there is some special happening that is unusually interesting. The week of March 10-14 was one of those times, and we now refer to it as German Week.

On March 10, we had fifty visitors from various locations in Germany who were here in observance of the 150th anniversary of the Republic of Texas. They visited San Antonio, Houston and Dallas before coming to Lubbock to tour the High Plains of West Texas. They were hosted here by Mary Alice Fulton and Joyce Shuman, co-chairpersons of the German Friends of Texas Committee. Dr. Meredith McClain, a professor in Texas Tech University's Germanic and Slavic Languages Department, served as guide for the group. In addition to studying the facilities of the Textile Research Center, these visitors toured other locations in and around Lubbock such as the Ranching Heritage Center, the Texas Tech Museum and the Llano Estacado Winery.

On the same day this group was at the Center, and for the following two days, we were involved

in meetings with representatives from the Schlafhorst organization. These were Ludwig Neuhaus of W. Schlafhorst and Company, Moenchengladbach, West Germany and Helmut Deussen of the American Schlafhorst Company in Charlotte, North Carolina. And then on March 13, Mr. Horst Beator of the Bremen Cotton Exchange, Bremen, West Germany, came to the Center for a discussion of West Texas cotton and our research.

We feel this was indeed German Week from our standpoint, and we were especially pleased to have all these friends visit with us at nearly the same time. We always look forward to an opportunity to discuss our research with visitors from other parts of the world.

VISITORS Other visitors during March included Jerry White, American Schlafhorst Co., Anniston, AL; John Kasik, Recognition Equipment Inc., Dallas, TX; Peter A. Till, Leschaco Inc., Edison, NJ, Dub McDonald, Dawson County Seed Co., Lamesa, TX, Roger Bolick, Allied Plastics & Fibers, Hopewell, VA; Kurt W. Masurat, George A. Goulston Co., Monroe, NC; David E. Butterworth, J & J Products Inc., New Brunswick, NJ; Lawrence Petersen, Danevang, TX; Donnell Echols, Lamesa, TX; Zerle L. Carpenter and Perry Adkisson, Texas A&M University System, College Station, TX; and Frank X. Werber, USDA Agricultural Research Service, Beltsville, MD.
