TRC

TEXTILE TOPICS

INTERNATIONAL CENTER FOR TEXTILE RESEARCH AND DEVELOPMENT
TEXAS TECH UNIVERSITY / LUBBOCK, TEXAS / U. S. A.

Volume XVIII, No. 8 April 1990

TESTING OF INTERNATIONAL COTTONS

The scope of the research and testing at the International Center for Textile Research and Development has expanded considerably in the last few years, with requests for fiber evaluations and spinning projects coming from many sources. We reviewed some of our work recently and realized we have tested cottons from a number of different countries. We have found it interesting to note the quality of these cottons, and we thought the data might be of interest to our readers. Therefore, we are carrying in this issue of *Topics* some of the results obtained by testing cottons from seventeen countries.

Before going further, we want to point out that we are not suggesting the cotton samples we have received represent the overall quality produced in the various countries. It could well be that the samples sent to us are either the best quality, the lowest quality, or perhaps the average for the country. We realize that many locations produce wide variations in quality, and we are not presumptuous enough to suggest the results we are presenting represent the normal quality that might come from a given country.

TABLE I: Fiber Testing by High Volume Instruments (average values)

Country	No. of Samples	Micronaire	Length (inches)	Uniformity Ratio (%)	Strength (g/tex)	Elongation at Break (%)
Argentina	4	3.9	1.08	80	25	7.6
Australia	1	4.4	1.10	82	29	8.2
People's Republic of China	13	4.1	1.09	81	22	7.6
Colombia	1	4.7	1.12	84	21	7.8
Costa Rica	1	4.2	1.10	82	24	6.2
Guatemala	2	3.4	1.22	80	28	7.6
Ivory Coast	1	4.4	1.17	81	24	6.4
Mali	2	4.1	1.17	82	26	6.9
Mexico	4	3.9	1.08	80	25	7.6
Pakistan	1	4.6	1.08	81	25	6.2
Paraguay	1	3.4	1.22	80	28	7.6
Russia	5	4.3	1.06	81	26	
So. Africa	1	4.2	1.10	82	26	6.4
Tanzania	1	3.8	1.05	81	21	7.0
Togo	1	4.3	1.12	81	24	6.8
Upper Volta	1	4.3	1.13	83	25	6.4
Uruguay	1	3.0	1.54	80	35	5.4

It will be seen in Table I that in some cases we had only one sample, but even from this limited testing, we observed some interesting details.This table gives average values, and realizing that averages can hide a great amount of variation in any set of data, we are presenting more detailed information on four of the cottons in Table II on the next page. This table presents results of testing samples from Argentina, China, Mexico and Russia on the Shirley FMT3. The data show a remarkable correlation between percent mature fibers, micronaire and fineness. Five of the six samples from Russia had maturity levels of 86% or above, while one sample had a measurement of 70% with a fineness of 142 millitex and micronaire of 3.2. The more mature cottons had higher fineness and micronaire values.

The results of testing the cotton from People's Republic of China revealed that two of the thirteen

TABLE II: Fiber Test Results from Shirley FMT3

Country	Sample No.	Percent Mature Fibers	Micronaire	Fineness (millitex)
Argentina	1	87	4.3	164
	2	85	4.4	175
	3	89	4.4	169
	4	90	3.9	142
People's Republic of China	1	86	4.2	165
	2	34	2.0	123
	3	88	4.7	183
	4	86	4.6	183
	5	86	4.5	180
	6	84	4.5	181
	7	73	3.8	166
	8	82	4.5	189
	9	78	4.2	180
	10	84	4.1	164
	11	85	4.2	167
	12	87	4.5	178
	13	36	2.0	119
Mexico	1	86	4.1	157
	2	80	3.6	142
	3	80	3.6	146
	4	86	4.2	165
Russia	1	91	4.5	167
	2	89	4.2	156
	3	90	4.7	178
	4	70	3.2	142
	5	89	4.4	167
	6	86	4.2	163

samples had extremely low maturity, fineness and micronaire readings. These had maturity values of 34 and 36 percent. The micronaire values were 2.4 and 2.3 when tested on an HVI system, while the Shirley FMT3 gave readings of 2.0 for both. Fineness measurements were 123 and 119, far below the values for the other samples that had maturities of above 80%.

For several years we have been studying the relationship between maturity, fineness and micronaire on American upland cottons, and we feel our understanding of these measurements has been strengthened by the results obtained from testing cottons from other parts of the world. We are always pleased to work with our international friends, and we enjoy evaluating cottons from various locations.

Our fiber program is supervised by Harvin R. Smith, head of Materials Evaluation, and Pauline Williams, manager of our fiber testing laboratory.

ATMI COTTON COMMITTEE MEETS AT CENTER

We were pleased to have the Cotton Committee of the American Textile Manufacturers Institute hold its spring meeting at the International Center on April 17 and 18. Committee activities began with an executive session for members and invited guests. Another portion of the program was given to discussions of cotton quality, classing by high volume instrument systems, and current problems with processing.

The executive session included a presentation by Mr. Jesse F. Moore, director of the USDA's cotton division of the Agricultural Marketing Service. Another presentation was made by Mr. Herbert Wright, of Wright Fibers, Dallas, Texas, who reported on work underway to manufacture knitted bagging of 100% cotton for covering bales of cotton.

ATMI Cotton Committee members attending this meeting were Duke Kimbrell, Parkdale Mills; J. W. Chesnutt, Harriet & Henderson Mills; Waymon D. Gibson, Greenwood Mills, Inc.; B. W. Henry, Avondale Mills, Inc.; John T. Hill, Springs Industries, Inc.; William R. Hill, Clinton Mills, Inc.; G. Ray Jeffcoat, Opp and Micolas Mills, Inc.; James R. King, Burlington Industries, Inc.; David R. Lafar, III, Lafar Industries, Inc.; James L. Mahaffey, Jr., Dixie Yarns, Inc.; David Mauney, Sara Lee Knit Products; Hollis M. Simpson, Russell Corporation; and A. N. Stall, Jr., Milliken and Company. Others attending the meeting were Billy R. Henderson, in place of David L. Harrison of Mount Vernon Mills, Inc.; Paul Ricardi, substituting for Robert H. Chapman, Jr., Inman Mills; George Blomquist of Parkdale Mills; and Ronald L. Floor of the ATMI staff. Representing the ATMI Board of Directors was Bryan C. Miller, Jr. of Brentex Mills, Brenham, Texas.

While the official portion of the committee activities was held in the auditorium of the International Center, social activities in the evening were sponsored by the Lubbock Cotton Exchange. These afforded an excellent opportunity for the textile executives to meet with a number of marketing firms located in Lubbock.

VISITORS

In addition to the ATMI Cotton Committee, April visitors to the International Center included Perry Adkisson, Texas A&M University Systems, College Station, TX; Lester J. Smith, Cone Mills Corporation, Greensboro, NC; Edwin T. Cansler, Platt Saco Lowell, Greenville, SC; Barbara Haralson, Safford Valley Cotton Growers Co-op, Inc., Safford, AZ; Susan Kerr Landrum, Allied Fibers, Petersburg, VA; Roger Bolick, Allied Fibers, Hopewell, VA; Kurt Masurat, Goulston Chemical Co., Monroe, NC; Rene Sonerregger, Resoco S.A., San Jose, Costa Rica; and Dale Garrison, Tres Rios Textiles, San Jose, Costa Rica.

Visiting groups included 48 members of the Scurry County, TX Farm Bureau; 135 women attending the Texas State Catholic Daughters convention in Lubbock; 28 participants in a spouses tour for the College and University Physical Plant Directors meeting at Texas Tech University; five members of the Plainview, TX Home Extension group; and 140 students from elementary schools in the Lubbock area.

PLEASE HELP US KEEP OUR MAILING LIST CURRENT!

The mailing list for *Textile Topics* contains more than 2,200 names and addresses, and it is virtually impossible to keep this list 100% accurate. Therefore, we periodically ask for the help of our readers in updating our list. Though we frequently do receive notice that someone has retired, or a request that a new name be added, we feel that some copies of *Topics* are perhaps being sent to wrong addresses or to people who are no longer at the address we have for them.

We do not want to send *Topics* to persons who are not interested, or who have moved to another business location. Therefore, we again ask that if there has been a change of address, or a change in personnel of your organization, please let us know. We appreciate your assistance in this more than we can tell you.

NOTICE TO EDITORS

We occasionally receive requests from editors and publishers for permission to reprint information that has appeared in *Textile Topics*. We are pleased that the articles we present are interesting and informative, and we are happy to give permission for material to be reprinted. We do, however, request that all such reprints credit the information to *Textile Topics*. Also, we appreciate receiving a copy of any article in which reprinted material appears. In this way, we can be assured that no misunderstanding or printing error has occurred that might change the reliability of the information.