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PRICE RESIGNS

John B. Price, assistant director of the International Center for Textile Research and Development since 1987, resigned his position effective November 6, 1992. He has accepted a position in Processing Research with the United States Department of Agriculture - Agricultural Research Services in New Orleans, Louisiana.

For those who wish to contact Mr. Price, he can be reached at the following address:

USDA-ARS
P. O. Box 19687
New Orleans, LA 70719

We wish him success in his new position with the U.S. Department of Agriculture.

EVALUATION OF THE RIETER B1 UNICLEAN MACHINE: Part 2

In our last issue of *Textile Topics* (Aug/Sept 1992) we introduced and reported results from work completed with the use of the Rieter B1 Uniclean machine in the opening line. The study was devoted to assessing the performance of the B1 Uniclean relative to that of the Monocylinder in the processing of medium, long and extra-long staple cottons. Only the results using medium staple cotton were reported.

We stated that one goal for the machine was its improved cleaning potential could be beneficial in either removing bark or in preparing stock in such a manner that subsequent machinery would be more capable of effecting its removal.

Results Using Long Staple California Cotton

A total of five samples of long staple California cotton was processed through the B1 Uniclean at various settings, with one lot processed through the Monocylinder for reference purposes. While the "intensity" of cleaning (roll speed) was varied over a similar range to that used for the medium staple cotton (see *Textile Topics*, Aug/Sept 1992), the "waste amount" (grid bar settings) was confined to lower values in keeping with the lower trash content. The remaining blowroom machinery was set up according to the optimized specifications in which R20/10 and R10/10 beaters were used at 820 and 950 rpm in the first and second ERMs, respectively. Carding was performed at a lickerin speed of 1130 rpm with a main cylinder speed of 450 rpm and wide feedplate setting.

The data in Table I show that the quantity of the waste extracted by the B1 machine actually decreased as the "waste amount" increased. There were no other trends visible. Presumably, any lot-to-lot variation in trash content and errors in collection of the wastes were sufficient to mask any trends with cleaning roll speed and grid bar settings. In comparison with the lots processed via the Uniclean machine, the blowroom utilizing the Monocylinder extracted less waste at each of three cleaning points but the undercard and filter waste was greater.

TABLE I

WASTE DATA: B1 EVALUATION (CALIFORNIA COTTON)

Sample Number	301	302	303	304	305	306
Intensity	0.3	0.5	0.5	0.7	0.9	Mono-
Waste Amount	2	2	4	4	4	cylinder
CLEANING POINT						
BLOWROOM						
B1 Uniclean	0.75	0.75	0.65	0.65	0.60	- - -
Monocylinder	- - -	- - -	- - -	- - -	- - -	0.67
ERM 1	1.06	1.15	1.09	1.19	1.11	0.92
ERM 2	0.80	0.85	0.82	0.86	0.86	0.78
CARD						
Undercard	1.13	0.78	1.04	0.80	0.77	1.33
Filter	2.85	3.71	3.50	2.96	3.13	3.94
TOTALS						
Blowroom	2.61	2.74	2.55	2.70	2.57	2.36
Card	3.98	4.49	4.53	3.76	3.91	5.27
OVERALL TOTALS	6.59	7.23	7.09	6.46	6.47	7.63

Table II on the next page is a summary of the breakage rate data obtained when rotor spinning N_e 26/1 from each of the six lots. The breakage analysis shows that spinning performance was poor, due to a very high number of entanglement-related breaks. The number of trash-related breaks was negligible. There was little difference in performance between lots and no trend could be discerned. The reason for the high frequency of entanglement-related breaks is unknown.

The yarn properties show little variation betwen lots. There was a suggestion that the strongest yarns, in term of skein strength, were obtained with a roll speed of 640 rpm (cleaning intensity of 0.5). How-

ever, this was not supported by the single-yarn tensile data.

TABLE II

ROTOR SPINNING BREAKAGE ANALYSIS (CALIFORNIA COTTON)

Sample Reference	301	302	303	304	305	306
Total Rotor Hours	200.4	200.4	200.4	200.4	200.4	200.4
Package Length (km)	56.01	56.01	56.01	56.01	56.01	56.01
Total Weight Spun (lb)	67.31	67.31	67.31	67.31	67.31	67.31
Sliver Causes	0	0	0	0	0	0
Spinning Causes						
Bark	0	0	0	0	1	0
Seed Coat Fragment	0	0	2	0	0	0
Trash	0	0	0	0	0	0
Total Trash-related	0	0	2	0	1	0
Nep	1	2	1	0	0	0
Slub	57	58	56	61	60	60
Slub with Yarn in Rotor	0	0	1	0	3	0
Trashy Slub	2	6	3	2	3	0
Total Entanglement-related	60	66	61	63	66	60
Unknown	1	3	1	1	0	1
Yarn in Rotor	0	0	0	0	0	0
Total Unknown	1	3	1	1	0	1
Total Spinning Causes	61	69	64	64	66	61
Uninspected Breaks	1	2	3	2	1	2
Non-spinning Causes						
Foreign Matter	5	3	0	1	0	1
Mechanical						
Take-up-high Tension						
Operative-induced						
Total Non-spinning Causes	5	3	0	1	0	1
Proportion Trash-related	0.0 %	0.0 %	3.1 %	0.0 %	1.5 %	0.0 %
Proportion Entanglement-related	98.4 %	95.7 %	93.3 %	98.4 %	98.5 %	98.4 %
Proportion Unknown	1.6 %	4.3 %	1.6 %	1.6 %	0.0 %	1.6%
Total Spinning & Uninspected	62	71	67	66	67	63
per 1000 Rotor hrs.	309	354	334	329	334	314
per 1000 lbs.	921	1055	995	981	995	936
Total Interruptions (all counts)	67	74	67	67	68	64
per 1000 rotor hours	334	369	334	334	339	319

Results Using Extra-long Staple Pima Cotton

In a similar manner to the long staple cotton, five samples of Pima cotton were prepared via the B1 Uniclean machine with a sixth lot run through the Monocylinder as a comparison. In an attempt to detect fiber damage other than in terms of yarn quality, the proportion of combing noils was determined for each lot. The proportion of waste extracted including the combing waste data is seen in Table III. In this instance the Monocylinder apparently removed more trash than the B1 Uniclean, irrespective of the settings used. The undercard waste was lower, presumably as a result. Among the data for the Uniclean machine, there was little evidence that changes in the machine specifications had any effect on the quantity of waste removed. The combing noils data did not show any difference between treatments. Presumably any signs of damage at such an early stage of cleaning, if any, are masked by subsequent treatments.

As a means of providing replicated data, four yarns were spun from roving prepared from each cotton lot. The yarns were Ne 50/1 carded and combed, Ne 72/1 combed and Ne 80/1 combed. Despite the elaborate experimental plan, no trends were noted, either in terms of yarn properties or spinning performance.

Results Using Raw Gin Motes

Motes of extremely low grade were passed through the blowroom consisting of B1 Uniclean machine and two ERM machines equipped with the most aggressive beaters and the highest speeds (i.e. R10/10 and R5.1/12 types, respectively). The quantity of waste extracted by the Uniclean machine (Table IV) had a visibly high trash content, indicating that increased cleaning power (the number of cleaning points) was needed prior to the card. The quantity of material extracted by the B1 Uniclean was so great that it was removed from the side of the machine with the paddle constantly in operation.

This project was sponsored by the Texas Food and Fibers Commission. The report was written by John B. Price, assistant director of the International Center for Textile Research and Development, prior to his resignation. It was edited for *Textile Topics* by Cay Amason.

We extend a special thanks to the Rieter Corporation for loaning us the B1 Uniclean machine and for the donation of the Hollingsworth Trashmaster which will be used with the Rieter C4 card in future studies.

TABLE III

WASTE DATA: B1 EVALUATION (EXTRA LONG STAPLE PIMA COTTON)

Sample Number	401	402	403	404	405	406
Intensity	0.1	0.3	0.3	0.5	0.7	---
Waste Amount	1	1	3	3	3	---
CLEANING POINT						
BLOWROOM						
Monocylinder	---	---	---	---	---	1.13
B1 Uniclean	0.96	0.65	0.70	0.68	0.65	---
ERM 1	1.35	1.01	1.22	1.05	1.06	1.08
ERM 2	---	---	---	---	---	---
CARD						
Undercard	1.37	1.36	1.26	1.43	1.26	0.92
Filter	4.01	3.96	2.81	3.65	4.17	3.17
TOTALS						
Blowroom	2.31	1.66	1.92	1.74	1.71	2.20
Card	5.38	5.32	4.07	5.08	5.44	4.09
OVERALL TOTALS	7.69	6.98	5.98	6.81	7.15	6.29
Combing Noils	17.7	18.0	17.5	17.4	17.9	17.9
Total Waste When Combing	24.0	23.7	22.4	23.0	23.8	23.0

TABLE IV

WASTE DATA: B1 EVALUATION (RAW GIN MOTES)

Sample Number	501
CLEANING POINT	
BLOWROOM	
B1 Uniclean	30.81
ERM 1	20.54
ERM 2	14.55
CARD (Tandem)	
Undercard	8.56
Filter	5.86
TOTALS	
Blowroom	65.90
Card	14.42
OVERALL TOTALS	80.37

TEXAS INTERNATIONAL COTTON SCHOOL

The seventh class of the Texas International Cotton School was conducted at the International Center for Textile Research & Development from October 5 through 16, 1992. The class was composed of sixteen students from eleven countries.

The school is sponsored by the Lubbock Cotton Exchange and two sessions are held each year, in April and October, beginning on the first Monday of the month. Each class lasts for two weeks.

Students attending Class VII, and the companies they represented, were:

from Australia: Andrew Feez, QUEENSLAND COTTON, Brisbane, Queensland; and Andrew McGown, DUNAVANT ENTERPRISES PTY., LTD., Moree, New South Wales;

from Bulgaria: Jivko Dachev, MONDTEX, Sofia;

from Dominican Republic: Justo Roberto Cabrera, INDUSTRIA de FIBRAS DOMINICANAS C. por A., Santo Domingo;

from Ecuador: Fernando Almeida, ASOCIACION INDUSTRIALES TEXTILES del ECUADOR, Quito;

from Israel: Gideon Laks, KITAN CONSOLIDATED, LTD., Tel Aviv;

from Italy: Pietro S. Parisi, FRANCESCO PARISI CASA DI SPEDIZIONI SPA., Trieste;

from Mexico: Fernando M. Gonzalez, CORPORACION TEXTIL BONANZA S.A., C.V., Puebla;

from Nigeria: Ashok Hirway, CHURCHGATE GROUP, Lagos;

from Peru: Luis Antezano, CREDISA, Lima;

from Taiwan: Phillip Sze-Whei Wong, CHENG YUAN TRADING COMPANY, Taipei;

from the United States: Ashley Bourne, PACIFIC FIBERS, Phoenix, AZ; Mark Lehner, LEIGH FIBERS, Spartanburg, SC; Robert Kollman, KOLLMAN & GANT COTTON, Taylor, TX; Bo Flygare, BO-CO INTERNATIONAL, Lubbock, TX; and Jamie P. Greene, SEA ISLAND COTTON, Lubbock, TX.

Instructors for the textile technology sessions included John Abernathy and John Gannaway, Texas A&M Agricultural Research Service, Lubbock; Roy Baker and Alan Brashears, USDA–ARS, Lubbock; Frank Jones, Lubbock; and ICTRD Interim Director Harvin Smith and Assistant Director John B. Price.

Visiting lecturers included Joseph J. O'Neill, New York Cotton Exchange, New York, NY; Tom Bell, ContiCotton, Chicago, IL; Keth Henley, Cotton Outlook, Memphis, TN; Barbara Shaeffer, Motion Control Inc., Dallas, TX; and Joe Yankey, Zellweger Uster (Spinlab), Knoxville, TN.

The next class of the Texas International Cotton School is scheduled for April 5 through 16, 1993. Information on the school may be obtained by contacting Mandy Howell at the Lubbock Cotton Exchange, 1517 Texas Ave., Lubbock, Texas 79401; telephone 806/763-4646; FAX 806/763-8647.

TICS VII students are shown with Joe O'Neill, New York Cotton Exchange (3rd from left, back row), TICS Coordinator Mandy Howell (3rd from right, front row) and TICS Assistant Coordinator Karen Thompson (3rd from left, front row).

DONATION RECEIVED FOR COTTON RESEARCH

The International Center for Textile Research and Development recently received a monetary donation from the Lubbock County Women's Cotton Promotion Association, to be used for ongoing cotton research.

The Lubbock County Women's Cotton Promotion Association was formed in the mid-1960s to promote the use of cotton in apparel and household fabrics. At that time, cotton usage had declined because of the easy-care popularity of the newly developed man-made fibers, and it was difficult to find anything made of 100% cotton or even a cotton-rich blend.

Founded by a ginner's wife in Ralls, TX, the organization was active for more than a decade. Among the promotions sponsored in area communities were harvest festivals (with a Cotton Queen), art shows, fashion shows, make-it-with-cotton sewing contests and the sale of cotton items including cotton knit shirts that proclaimed "Wear Cotton or Nothing at All." One special program, sponsored by Ciba Geigy Corporation, was "First Ladies' Fashions and Fancies in Cotton," featuring cotton garments which might have been worn by past U.S. presidents' wives, modeled by members of the Lubbock County Women's Cotton Promotion Association.

The organized promotion of cotton was pursued for about fifteen years. The last officers of the Lubbock

County Women's Cotton Promotion Association were elected in 1984, and the organization is no longer active. Because the Textile Engineering Department at Texas Tech University assisted the association by testing samples of the fabrics used in the sewing contests, the organization has given this donation to be used for cotton research.

The International Center for Textile Research and Development greatly appreciates both the promotion activities of the organization over the years and the generosity of the members in making the donation. It will be used wisely.

VISITORS

Visitors to the Center during October and November included H. Eugene Abbott, James P. Florez and Grant Billingsley, Midland Industrial Development Comm., Midland, TX; Larry Harris, Sara Lee Hosiery, Winston-Salem, NC; Lloyd B. DeLuca, USDA-SRRC, New Orleans, LA; Athanassios Locas, Geoponiko Spiti Seed Co., Athens, Greece; Lynn McDonald, Triumph Seed Co., Ralls, TX; Peter J. Bos, S. Frankenhuis, Haaksbergen, Holland; R. L. Shah, Ahmedabad Textile Research Association, Ahmedabad, India; Mario Mekler, Texturadora Moderna, S.A. de C.V., Juarez, Mexico; Leon Freiman, Sweaters Riviera, Mexico City, Mexico; Kurt F. Muller, K&E Company Ltd., Hong Kong; Yusuf S. Aly, Beximco USA Ltd., Dalton, GA; A. S. F. Rahman, Bangladesh Export Import Co. Ltd., Dhaka, Bangladesh; Momshad Hashem, Padma Textile Mills Ltd., Dhaka, Bangladesh; and Khalil-ur-Rehman, Associated Productivity Consultants, Karachi, Pakistan.

On October 13, thirty-three textile executives from 15 countries came to the Center as part of the itinerary of the 1992 Cotton USA Orientation Tour sponsored by Cotton Council International, National Cotton Council and the Foreign Agricultural Service of the United States Department of Agriculture. They were accompanied by Will Bettendorf, CCI, London, England; Yoon-Keun Park, CCI, Seoul, Korea; Vaughn Jordan, CCI, Washington, DC; and Kathryn A. Broussard and Patrick Packnett, USDA, Washington, DC.

Other groups included ten members of Rolling Plains Textiles of Seymour and Mundy, TX, accompanied by David Scott, West Texas Utilities, Abilene, TX; 12 ginners from Tanzania; 19 students from Eastern New Mexico University, Portales, NM; nine students from South Plains College, Levelland, TX; a class of six from Levelland High School, Levelland, TX; 11 students from Hale Center High School, Hale Center, TX; 46 students from Texas Tech University's Agricultural Economics Department; 30 members of the Southeastern Hand Club (orthopedic surgery), and ten Dermatology Association members, all of whom were in Lubbock attending conferences at the Texas Tech University Health Sciences Center.

Also visiting were 18 cotton researchers from the Cotton Research Center, Giza, Egypt, accompanied by Jack Cloude, High Plains Research Foundation, Halfway, TX.