



62nd Plenary Meeting of the INTERNATIONAL COTTON ADVISORY COMMITTEE

MINUTES SECOND OPEN SESSION

9:00 AM, Tuesday September 9, 2003
Ms. Iwona Frydrych in the Chair

The CHAIR called the meeting to order and stated that in the last 20 years the classification of cotton has seen tremendous changes as it moved from manual classing to instrument based classing. She said that we have entered the new millennium with many fully automatic systems at our disposal that provide not only precise measurements of parameters but also their complex statistical analysis. Modern instruments allow measurement of physical-mechanical properties of a bundle or a single fiber as well as intrinsic value parameters like maturity, stickiness and color. The Chair remarked that developments in fiber quality testing systems follow the developments in spinning technologies that, due to increased speed, require fiber quality to be assessed more precisely.

The CHAIR invited Mr. Jean-Paul Gourlot of CIRAD in France to make a presentation on 'Stickiness and Seed-coat Fragments: Measurements and Consequences.' Mr. Gourlot said that stickiness is caused by honeydew, but not all types of honeydew cause stickiness. The honeydew secreted by whitefly and aphids is the primary cause for stickiness in cotton. The basic solution lies in not letting the insects multiply to the extent that stickiness emerges. However, solutions are available to handle sticky cotton once the problem is there. Such choices include mixing sticky cotton with non-sticky cotton, adjustments in humidity during spinning and selection of spinning machinery that is less sensitive to stickiness. On seed-coat fragments, Mr. Gourlot stated that the problem originates during ginning and it is very difficult to eliminate seed-coat fragments from lint. A variety of visual, mechanical and optical methods are available to identify seed-coat fragments in lint and yarn. Some varieties have a tendency to produce more seed-coat fragments compared to others, and Mr. Gourlot reported that CIRAD breeders have successfully developed varieties that produce fewer seed-coat fragments.

Replying to a question raised by the delegate of Brazil, Mr. Gourlot observed that seed coat fragments originate during ginning and can be reduced by improving ginning. He said some varieties have a stronger influence on the creation of seed coat fragments rather than ginning.

The delegate from India asked if there was any difference in seed coat fragments if the same variety was ginned on a roller or saw gin. Mr. Gourlot said that he is not aware of any such differences.

Responding to a question from the delegate of Egypt, Mr. Gourlot said that there are almost 10 different sources of stickiness but the effect of whitefly and aphids' honeydew is of high concern to the spinning industry compared to others.

The delegate of Sudan wanted to know if it was feasible to categorize cotton a low or highly sticky and what is the difference between honeydew secreted by whitefly and aphids compared to other sugars. Mr. Gourlot replied that it is no doubt possible to categorize cotton into low, medium and highly sticky, but it would increase the chances of litigation. He added that sugars secreted by insects are different from other sugars in sticky cotton.

The Chair presented a report from the breakout session on new technologies in cotton quality testing where two papers, one each from Lintronics Ltd. and Uster Technologies, Inc., were presented. She said that the adoption of HVI systems had a global affect on cotton classification. Lintronics Ltd. has developed a machine called 'FiberLab' which is a combination of Fiber Contamination Tester and HVI based measurement methods. The data from the FiberLab is summarized into the Windows based operating software. The Chair mentioned that the stickiness data recorded on the FiberLab may emerge into a commercial stickiness grading system

based on the round tests conducted in 2002 and 2003 and more planned for 2004. Presentation from Uster Technologies, Inc. emphasized the significance of sample conditioning, in particular the moisture contents in the sample. The company data showed a 1.2% increase in fiber length with each 1% increase in fiber moisture. According to the Chair, the company is working on the correction of fiber qualities to a fixed moisture content for reducing inter-laboratory variation in results. The Chair also mentioned two more papers from Premier Polytronics Pvt. Ltd. and Shaffner Technologies, Inc., which were not presented but were available at the Open Session. Premier Polytronics Pvt. Ltd. has developed a machine aQura for measuring neps and short fiber content. Premier ART said it was latest generation optics and provides perfect measurement of length and strength. Shaffner Technologies, Inc has presented the idea of classing at each gin since 2000. The paper from the company also discussed an improved version of Rapid Tester called IsoTester, which is most suitable for measuring short fiber content.

Mr. Joao Luiz Pessa of the Association of Brazilian Cotton Producers talked about cotton classing in Brazil. He remarked that the conventional practice of selling and buying cotton based on types has serious repercussions. Classing must be based on machine-tested characters. Mr. Pessa said that Brazil is government has abolished the Brazilian standards and replaced them with the Universal Standards from the USA. Now the Brazilian classers have to be more precise and must narrow the quality specifications to fit the Universal Standards. However, as guidance for buyers and sellers during the transitory period, Brazilian type boxes that are comparable with the Universal Standards have been published. Mr. Pessa added that the traditional way of manual classing, Universal Standards and classing with HVI systems should not be mixed with each other. He suggested that farmers all over the world should follow the Brazilian example and take steps toward unification of classification systems in the world.

The delegate of Russia wanted to know from Mr. Pessa if Brazil was able to adopt HVI color standards on Brazilian cotton. Mr. Pessa replied that Brazil has no problems in applying HVI colors to Brazilian cotton.

The delegate of Burkina Faso observed that most West African countries have a high ginning outturn of 42% as against 39% mentioned by Mr. Pessa. Mr. Pessa observed that high ginning percentage in the African countries could be due to hand picking, and if Brazil had hand picking ginning outturn in Brazil could also exceed 39%.

The delegate of Egypt referred to the Colorimeter used in the USA and the shift to HVI colors, as they do not match each other. But Mr. Pessa did not support checking color twice once visually and then by HVI, which may not be in the ultimate interest of farmers.

Responding to questions raised by the delegate of Paraguay and the representative of CIRAD-CA, Mr. Pessa said that the transition process in Brazil has been smooth. Brazil has 14 HVI systems owned by farmers associations, the Sao Paulo Commodity Exchange and private companies, and they are enough to class all Brazilian cotton production on HVI in a period of seven months.

The delegate of Sudan wanted to know the price of machine based HVI classification versus manual classification, and Mr. Pessa stated that on the average it costs 15 US cents to test a sample of cotton on HVI, which is almost equal to the cost involved in manual classification. However, the initial investment in buying the HVI equipment is a big issue.

Ms. Norma McDill of the USDA explained the US system of cotton classification and maintenance of accuracy and precision. She said that all US cotton is tested with HVI following the same operating procedures throughout the classing offices in the country. Ms. McDill observed that for accurate measurement of quality characters, it is very important that HVI systems are regularly and properly calibrated. The instrument must pass the stringent performance evaluations conducted on the known-value cottons. Ms. McDill explained how the calibration cottons with high within-bale uniformity and desired value characters measurements are selected after rigorous testing in many labs. Approximately 1% of all cotton classed in each classing office is randomly selected for retesting for quality assurance purposes. These samples called 'checklot samples' are shifted over night to the Quality Assurance Branch for retesting. All HVI classing in the USA is done at 21+/- 0.6 degrees centigrade and 65% +/- 2% relative humidity. Ms. McDill observed that in the US, a large number of instruments have been organized into efficient measurement laboratories and these laboratories have been integrated into a classification system for the benefit of the US cotton industry.

The delegate of Egypt commented that standard boxes and HVI data have no relationship with each other. The delegate of Brazil also shared the same views but Ms. McDill did not agree with them.

The delegates of Sudan and India raised the issue of high humidity range of 6.75% to 8.25% as reported by Ms. McDill to which she agreed that it is a wide range.

The Chair concluded the meeting at 10:35 am with the remarks that cotton classing has gone through a big transition and instrument manufacturing companies are currently working to eliminate/minimize human and atmospheric effects on machine testing and improve the reliability of the data.