PROGRESS ON STICKINESS TESTING

The ITMF International Committee on Cotton Testing Methods (ICCTM) announces a new initiative to standardize the testing of stickiness in cotton samples. The stickiness testing initiative will be led by Jean-Paul Gourlot and his colleagues at Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), in collaboration with Axel Drieling at Faserinstitut Bremen e.V. (FIBRE) and Karsten Fröse at the Bremen Baumwollbörse.

Measuring stickiness is a highly complex problem. As a first effort, this initiative is designed to be simple and relatively easy, with the understanding that more research will inevitably be needed, through the three following and successive steps.

The first step in a process of measuring stickiness in cotton is to obtain, create or develop homogeneous samples of sticky cottons. ICA Bremen has been asked to assist with this step.

The second step is to conduct a round trial among all mechanical instruments used for testing stickiness, using homogeneous samples of sticky cotton developed with ICA Bremen. Results will be confined to reporting the number of sticky points detected in each sample. FIBRE has tentatively agreed to conduct such a stickiness round trial in conjunction with ongoing Bremen Round Trials.

The third step is to determine whether the results from the same instruments in different laboratories and different instruments in laboratories can be correlated, and the results from each instrument mapped to the results from other instruments.

Based on the Stickiness Round Trial, CIRAD and FIBRE will choose the type of instrument that gives the most reproducible results with the narrowest tolerances; this will be called the ‘Round-trial Reference Method’ for testing stickiness in cotton.

Based on the homogeneous samples of sticky cotton designed in step 1, the ICCTM will recommend that all laboratories and manufacturers of mechanical stickiness testing instruments calibrate to the ‘Round-trial Reference Method’. This may require further round trials, during which “grades” or “levels” of stickiness may be determined.

The ICCTM will not recommend or suggest that any mechanical testing method be abandoned. Rather, this initiative is a process by which one testing method will be identified as the ‘Round-trial Reference Method,’ and it will be recommended that results from all other methods be calibrated in conformance with said ‘Round-trial Reference Method.’

The ICCTM recognizes that the process of identifying a “Reference Method” is not a scientific approach for reaching a truly exact Reference Method. Nevertheless, this process has the virtue of simplicity and is a place to start in furthering the commercial measurement of stickiness in cotton.

Member of ICCTM are aware that the incidence of stickiness can vary within a bale, and the degree by which a bale is sticky can vary over time. These issues will be dealt with at a later time.

Further, the selection of a “Reference Method” and development of a definition of stickiness will not inhibit the development of better stickiness testing methods in the future. The development of calibration materials and definitions of stickiness are just the first steps in a process to fully tackle the issues of stickiness measurement, and a series of separate research projects may be needed, including work on the sources and causes of stickiness. For this, the ICCTM Steering Committee will help to seek funding for running these projects in the long-run.