T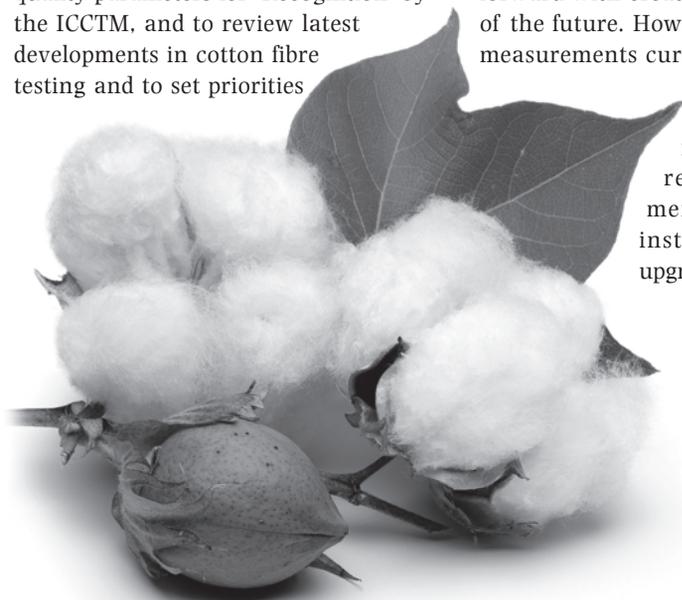he ITMF International Committee on Cotton Testing Methods (ICCTM) met in Bremen, Germany on March 15, 2016. Four companies from Germany, India, Italy, Switzerland and a research organisation in Australia each made presentations on developments in instruments to assess cotton quality parameters for 'Recognition' by the ICCTM, and to review latest developments in cotton fibre testing and to set priorities for research over the next two years. Major results of the meeting were:

Instrument recognition

Textechno, a German firm, demonstrated the capabilities of a new instrument for detecting, counting and classifying neps and trash in samples of cotton and cotton sliver.

MAG, an Indian company, discussed recent engineering advances in trash-testing technology.

Mesdan, an Italian firm, and Loepfe, a company in Switzerland, explained the engineering principles behind new instruments developed jointly by the two companies to test cotton and cotton sliver for stickiness and other parameters.

CSIRO, an Australian research organization, requested 'Recognition' for an instrument to test cotton fibres for maturity. Cottonscope has been developed over several years by engineers at CSIRO to make direct measurements of fibre maturity using image analysis of cross sections of fibres.

Advances in the basic science of measuring cotton fibre maturity are yielding the potential for creating better calibration materials for commercial measurement. Improvements in maturity measurements have produced relatively slow methods that are still very useful as tools for cotton breeders as they move forward with creating the cotton fibres of the future. However, faster maturity measurements currently in use in mill laboratories will benefit from these improved maturity reference measurements as existing instrumentation is upgraded.

A core function of the ICCTM is to review applications from instrument manufacturers for 'Recognition' of instruments as being sufficiently accurate, precise, and with results that are sufficiently repeatable so as to be commercially relevant to the cotton and cotton textile industries. Members of the ICCTM include engineers and scientists from around the world conducting research on cotton quality evaluation in six task force groups: HVI, elongation, stickiness, maturity, neps/trash, and color. The ICCTM meets every two years at the beginning of each International Cotton Conference Bremen.

Cotton fibre testing

High volume cotton testing continues

to progress, particularly for instrumentation suited for spinning mill applications. As breeding programs and the use of cotton hybrids result in improvements in the intrinsic technical performance properties of cotton fibre, more attention is being paid to the range and types of calibration cottons used with HVI. The ICCTM discussed procedures to ensure that calibration cottons used in testing different cotton species provide adequate ranges of fibre properties so as to provide reliable measurements.

Fibre elongation as a cotton property is gaining renewed interest as modern high-speed yarn production systems demand a combination of both fibre strength and elongation to operate

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efficiently and to produce yarn properties needed in markets today. New elongation measurement algorithms have been developed and are being tested. Comparative studies to ensure that multiple test instruments give the same measurement

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level are underway. Methodologies to improve elongation measurement and selection criteria for cotton breeders continue to be emphasized.

With the availability of very high speed computer technology, the use of imaging for measuring cotton trash and extraneous matter, both in cotton classing and in mill laboratories, is moving forward. Presentations on both classing applications and mill laboratory applications that use modern imaging technology were offered. **ATJ**