

**Proposal for Future Actions
in respect of the
Commercial Standardization of Instrument Testing of Cotton (CSITC)**

Expert Panel - International Cotton Advisory Committee

The Commercial Standardization of Instrument Testing of Cotton has been a topic of conversation ever since the Expert Panel was formed nearly a year ago. At the first meeting in Bremen the whole concept was discussed and various proposals were put forward. Since these suggestions have been well received, we now propose to put forward a seven point action plan being the recommended way forward to implement the concepts presented by the panel.

I do not propose to detail the conclusions reached in Bremen, since we believe the actions we shall describe in this presentation cover most of the points raised.

Firstly allow me to remind ourselves of the Aims and Objectives together with the proposed actions

The prerequisites for instrument testing must be:

- Reliable
- Practical
- Economical
- Suitable for the commercialization
- Arbitratable

and the actions we are proposing are:-

- 1. Definition of specifications for cotton trading
- 2. Definition of international test rules
- 3. Implementation of the test rules
- 4. Certification of the testing laboratories
- 5. Calibration standards
- 6. Specifying commercial control limits for trading
- 7. Arbitration procedures.

During our meeting in Bremen it was agreed that at this initial stage we should concentrate for international testing on the following characteristics:-

Micronaire

Strength

Length (UHML)

Length Uniformity (UI)

Colour (Rd and +b)

For the testing purposes we shall have to define early on whether we consider 10% sampling sufficient for this process, or the sampling must be 100%. It also could be on the basis of module averaging for example, since the idea is to endeavor reduce the work load at the instrument centre, and concentrate on the quality of the results, rather than quantity.

Though we are suggesting that the testing methods to be based on

- ASTM D5867 Standard Test Method
- USDA Guideline for HVI Testing
- ITMF HVI User Guide
- Other International HVI Working Groups

we shall be seeking to prepare international rules (rather than methods) which will accompany the thought process behind the proposals of the Expert Panel. We shall not be preparing detailed instructions on methods of testing, which accompany any testing instrument, but rather the basic rules for international co-operation in testing cotton. We are recommending the Fibre Institute in Bremen to undertake this task.

Once we have received the rules we shall have to agree them, and for this we shall look for assistance from the ITMF Committee for Cotton Testing, CIRAD, and the USDA.

The approval of these “international” rules, which would be used between laboratories, would of course finally lie with the Expert Panel.

Our next job would be to implement the rules. However before doing so we would need to obtain acceptance by the cotton producers, traders, processors and the spinning mills, of the principles behind the rules, since the inclusion of these basic rules would certainly have to be included in the cotton trading conditions. Likewise the rules for the Certification System of testing centers would also have to be contemplated.

For this all the Cotton Associations would have to be consulted, but clearly the leader in international trading rules is the Liverpool Cotton Association, shortly to become the International Cotton Association, who are very supportive of this initiative and can be counted on to assist.

So how do we envisage certification of the testing laboratories? We imagine the formation of regional or national certified centers corresponding and carrying out round trials with those instruments located in that specific region. If the region was large there might be more than one approved/certified centre. These centers in turn would carry out round trials with a selected international centre, which we are proposing would be the Bremen Institute, but clearly this responsibility could be also divided between other international centers like the USDA for example. These international centers would also carry out remote inspections of laboratories which had been approved by the regional center, as well as make random inspections of the certified laboratories.

They would also form national or regional centers for training in testing and calibration as well as provide maintenance assistance where necessary.

The determination of the certification procedures of laboratories would be extended to all the interested parties. At this time we are envisaging that one body, the Fibre Institute in Bremen would in fact issue the certification according to the control limits which will have been established, and the institute would issue and of course withdraw certification as the case arose. However we do envisage that other institutions could be involved with the certification or at least the standard of certification such as

ITMF Committee on Cotton Testing Methods – HVI Working Group
CIRAD, Montpellier, France
USDA – ARS, SRRC, New Orleans, USA
Wakefield Inspections
SGS

As regards manufacturing of calibration standards we are proposing that the USDA should be responsible for this important work this would include

- Definition of valid calibration standards
- Control of the selection of standards
- Defined validity period for defined standard sets
- Forwarding of calibration standards to all certified laboratories.

Now we come to the most important part of the concept for all this to be possible. We all need to agree that there are valid reasons for variations in test results though out the word. There are variations in the results even in individual bales due to the variation in cotton itself. There may be variations in the results of different bales from one lot. Certainly there are variations caused by the test method which we call “repeatability” and deviations between laboratories which we call “reproducibility”. Finally we can obtain a genuine variation depending on number of tests made per sample.

So we need to agree that there exists variance between instruments and conditioning of samples, which require some tolerance of control limits for trading cotton.

We do agree that moisture content in cotton varies with alterations in temperatures, and that cotton strength increases with higher relative humidity. However we do need to agree that as the other characteristics are effected to much lesser agree by fluctuations in moisture content, that such variances would be acceptable under commercial control limits for cotton trading.

So we need to establish the range and trading tolerances for these basic characteristics. Ideally for strength measurement we need to initially introduce software to correct results based on variations in climatization by the measurement of temperature and humidity, or better still the moisture content of the sample. For this we shall have to look to the manufactures of instruments to supply this information to assist in this project.

Certainly we shall need to quantify the different variations/tolerances proposed, but in final analysis the proposal is that it should be based on, Bremen and USDA round trial results, as well as other literature on the subject. It will be useful to make specific round trials with other organizations to supplement the results. All this would lead to a combination of acceptable variations between certified testing centers, as a basis for commercial trading control limits.

Naturally what we shall be looking for in the long term would be the development of a stand-alone, self calibrating instrument with internal climate control, requiring no operator intervention which would allow us to reduce the commercial tolerance closer to the “scientific tolerances” which would be ideal in a perfect world.

Having established this concept of trading tolerances, we still need to approach the commercial aspect as regards agreement between two parties. The logical step is to treat any variations between instruments outside of agreed tolerances between buyer and seller, in the same manner as we handle visual classing. Samples would be drawn and sent to an approved centre for arbitration identified in the contract, for example Liverpool, Bremen or Gdynia. The results would be communicated in the identical manner which exists for visual classing today, an arbitration award, using established value differences. As is the norm the costs involved would be for losers account. This arbitration between instruments would mimic what is done manually today, and in fact would be the most efficient way of eliminating poorly calibrated or badly operated instruments.

So in conclusion let me mention some other factors that will be required for this project to advance. We shall need the motivation of political support to implement these proposals in cotton trade. We shall need the support from the cotton trade growers, merchants, spinners. It will be important to agree on these future actions and ensure that we obtain the participation of the laboratories involved. We shall need to encourage those entities we have sited to responsibly undertake their part in the program

Finally and most important is that the project will require a provision of funds for those responsible for the testing. We encourage the ICAC to approach Common Fund for Commodities as well as National Governments for financial support.

We must offer our thanks to the Faserinstitut of Bremen for their valuable assistance with this presentation; additionally the Institute has prepared a time flow chart with estimated costs to undertake their part of the project. Once this program is approved in principle, we shall be able to present a timetable with costings and ask the other participants to do likewise. Then the project as a whole would be presented to the authorities together with the detailed reasoning for the importance of this program, so as to seek the funds that will be required.

Thank you.