

Preparation for the
Commercial Standardisation of Instrument Testing of Cotton
for Cotton Producing Developing Countries in Africa

Final Report
May 2006

Project Title	Preparation for the Commercial Standardisation of Instrument Testing of Cotton for Cotton Producing Developing Countries in Africa		
Duration	6 months		
Project Executing Agency	Faserinstitut Bremen e.V. (FIBRE), Germany		
Additional Participating Agencies	African Cotton Association, Benin (ACA) Tanzania Cotton Board, Tanzania (TCB) CIRAD, Montpellier, France		
Supervisory Body	ICAC		
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Summary

The industry demands for objective and reliable test results are increasing rapidly. Therefore developed cotton growing countries like the USA have already built up their national cotton quality assessment systems and instrumental classification has resulted in a competitive advantage for the USA in global marketing. It is obvious that the establishment of an adequate instrumental cotton testing system based on high volume instruments for the cotton producing countries in Africa and elsewhere would facilitate the access of their cotton to diverse global markets. But up to now there is no adequate international verification of test laboratories and their results. The availability of high volume cotton testing instruments (SITC¹) solely is not satisfactory. The test results have to be reliable and on an internationally agreed level. Cotton producing developing countries will be disadvantaged in their market position, if they do not manage to participate in an international system to assess the quality of test results.

In order to set up an international certification system for SITC test results, the ICAC Task Force on Commercial Standardisation of Instrument Testing of Cotton (CSITC) was established and began its work in 2004. With the aim a) to evaluate cotton quality solely on instrument testing and b) to enable the laboratories to produce reliable test results and therefore with the aim of allowing cotton trade to base on reliable and comparable test results, the aspired international certification system for SITC test results includes these central aspects:

- Set-up of an international co-operation system including international supporting partners, Regional Technical Centres in cotton producing regions and cotton testing laboratories
- Certification of test laboratories according to their test results with specific Round Trials
- Guidance / support to the laboratories to meet quality requirements
- Check of the laboratories for their laboratory practice

The objective of this pilot project was to prepare the implementation of the international cotton quality assessment in the cotton producing developing countries in Africa and therefore to assist especially the developing countries and Least Developed Countries (LDCs) to meet the emerging quality assessment demands of the global cotton market.

To achieve the objective, both of the following directions were followed:

- Definition of basic rules, which allow for
 - international cooperation between laboratories located all around the world, Regional Technical Centres and international expert bodies
 - laboratory certification
 - trade on the basis of the results of certified laboratories
- Identification of the requirements in the different African regions and best premises for a subsequent implementation of the certification system in Africa

In a planned subsequent full-fledged project the findings of this Fast Track project will directly be used to establish the International Cotton Testing Certification System in Africa with maximum economic efficiency. The project proposal for the full-fledged project was created, formulated and submitted during this Fast Track project.

¹ SITC – Standardised Instrument for Testing of Cotton → High volume instruments for the integrated measurement of the most important cotton fibre properties with standardized procedures and calibration

Component 1: Definition of Global Basic Rules

A) Demands of Cotton Business

The CSITC Task Force consists of representatives from all segments in the cotton value added chain, including cotton production, cotton trading, cotton testing and cotton processing (spinning), with the support of cotton associations and research institutions. Based on the findings of the CSITC Task Force and discussions with its members, the following major tasks can be stated for the commercial standardisation of instrument testing of cotton to fulfil the demands of cotton business:

1. Definition of specifications for cotton trading based on instrument testing
 - a. Selection of a set of properties and test parameters being qualified for trading purposes
→ This task is already finished by the actual work of the CSITC Task Force
 - b. Specification of the obliged standard material for calibration
→ This task is already finished by the actual work of the CSITC Task Force
 - c. Definition of procedures for sampling, testing and calibration
→ This task has been started and will be assisted by the work in the planned full fledged CFC-CSITC project
2. Evaluation of testing facility performance based on their test results in international round trials
→ This task was one important part of the executed work in component 1 of this project (see below). Additional steps will be covered in the planned full-fledged CFC-CSITC project.
3. Implementation of the international test rules in cotton trade
→ This task will be assisted by the work in the planned full-fledged CFC-CSITC project
4. Support of testing facilities to fulfil the demands in test reliability
→ This task will, for African testing facilities, be covered by the work in the planned full-fledged CFC-CSITC project
5. Check / certification of good laboratory practice / quality management in testing
→ In the CSITC Task Force it was decided that there will be no cotton specific system of inspection. Nevertheless the check of African testing facilities will be an integral part of the planned full-fledged CFC-CSITC project
6. Definition of arbitration procedures
→ This task will have to be covered in accordance to task 3 – implementation of the international test rules in cotton trade

In the CSITC Task Force meetings¹ it was decided, that the first priority will be the evaluation of testing facility performance with specific international CSITC round trials (task 2). With the Round Trial, the testing facilities will demonstrate their capability to meet recommended standards, although this certification can not guarantee the trueness of individual tests.

The integration of auditing and certification procedures of the laboratory operational work with ISO principles or ISO-like principles (task 5) will be deferred pending the completion of the Pilot Round Trials.

B) Development of a Suitable CSITC Round Trial to Evaluate Testing Facility Performance

In the CSITC Task Force it was decided that Faserinstitut Bremen and USDA will develop a suitable CSITC Round Trial system for evaluating testing facility performance, and will evaluate the Round Trial

¹ see reports of the meetings of the Task Force on CSITC (1 - March 2004, 2 - November 2004, 3 - June 2005, 4 - September 2005), available at ICAC

results. ICAC with its CSITC Task Force will serve an oversight role for this important task. The work on this task was conducted as a part of component 1 of this project.

To fulfil this task, a first Pilot Round Trial was conducted between July 2005 and September 2005. From the results different kinds of evaluation methods were developed, and the findings were presented at the 4th meeting of the CSITC Task Force in Liverpool in September 2005.

The first Pilot Round Trial included results from 33 laboratories:

- Europe (Belgium, France, Germany, Greece, Latvia, Poland, Switzerland, UK)
- North America (USA)
- South America (Brazil)
- Asia (India)
- Australia
- Africa (Benin, South Africa)

Regarding 96 tests per laboratory and 6 parameters for evaluation, more than 19000 test results were evaluated.

Based on the results and a survey between CSITC Task Force members and observers, the basic requirements for the CSITC Round Trial were fixed. Consequently, a Round Trial realization and evaluation procedure was developed and presented at the 5th meeting of the CSITC Task Force in Bremen on March 26th, 2006. The presented procedure was endorsed.

A. The Round Trial

- A.1. *The Round Trial will be conducted 4 times a year.*
- A.2. *Round Trial testing will be multiple day testing to enable reliable accuracy and precision evaluation.*
- A.3. *Each single test will consist of one measurement for micronaire, two measurements for length/strength and two measurements for colour*
- A.4. *The same number of tests will be done for each cotton. The number of tests will be 6 for each day*
- A.5. *The same number of tests will be done each day of testing. The number of days will be 5*

Test Scheme

	Cotton 1	Cotton 2	Cotton 3	Cotton 4	Cotton 5?
day 1	6 tests	6 tests	6 tests	6 tests	6 tests ?
day 2	6 tests	6 tests	6 tests	6 tests	6 tests ?
day 3	6 tests	6 tests	6 tests	6 tests	6 tests ?
day 4	6 tests	6 tests	6 tests	6 tests	6 tests ?
day 5	6 tests	6 tests	6 tests	6 tests	6 tests ?
Sub Total	30 tests	30 tests	30 tests	30 tests	30 tests ?
Total	120 to 150 tests for each Round Trial				

- A.6. *There will be 4 cottons to be tested for evaluation of the laboratories, each well pre-tested for their homogeneity (see B.4). These cottons will not include different processing or extremely different properties (like ELS) than the usual USDA upland cottons and their preparation, although other origins might be included.*
- A.7. *There will be the opportunity to take a 5th cotton in the round trial, e.g. with different processing or different behaviour. This cotton will not be taken for the evaluation of the*

laboratories, but for the overall evaluation of laboratory performance on different kinds of cotton samples.

- A.8. *The laboratories will be asked to include the typical variability of boundary conditions being usual in their laboratory.*
- A.9. *Testing should be done for all six properties (micronaire, strength, length, length uniformity, colour Rd, colour +b). If a laboratory does not have the ability to test all properties, then the evaluation will be done based on the given measurements.*
- A.10. *All laboratories will be asked to answer to specific questions related to their testing*
- *testing instrument*
 - *conditioning*
 - *accreditation/certification*
 - *standard material for calibration*
 - *actual climate during testing*
- A.11. *Details for testing:*
- *The laboratories will be asked to strictly follow the Round Trial procedure.*
 - *The testing laboratories should adhere to industry accepted practices as established in the ASTM Standard Test Method, the USDA's publication "Guidelines for HVI Testing" and/or the ITMF "HVI User Guide".*
 - *The selected instruments for the procedure shall be calibrated with USDA Universal Short and Long cottons, USDA Universal Micronaire cottons, and USDA colour tiles.*
 - *For the evaluation, all tests have to be done by the laboratories.*
 - *The number of tests by the laboratories has to be limited to the demanded number of tests to avoid a bias in evaluation.*

B. Evaluation

- B.1. *For the official evaluation of the laboratories, only accuracy will be evaluated at first.*
- B.2. *For each cotton, the average result of all tests on all days (30) of each laboratory is taken for accuracy evaluation.*
- B.3. *The evaluation system accounts for the relative distance to the interlaboratory average result (see below), without considering any allowed limits of acceptance.*
- B.4. *Evaluation of the laboratory results will be done in comparison to the interlaboratory average result. For information purposes, the estimated value from USDA (for US cottons) or collective work of USDA/FIBRE/CIRAD/additional labs (for other cottons) can be given as an addition.*
- *If not enough laboratories are participating, the estimated values will be used additionally to the interlaboratory average. The minimum number of participating laboratories will be 20.*
- B.5. *For the interlaboratory average, a 90% trimmed average result will be taken, as it is simple, easy to understand and well accepted. A 90% trimmed average result removes the highest 5% and lowest 5% of the individual measurements.*
- B.6. *The laboratory evaluation will start with quantitative numbers (rating). For laboratory comparison, the distribution of evaluations of all labs will have to be published.*
- B.7. *The quantitative evaluation data might, on long term, be used to achieve qualitative (ranking) results.*

C. Presentation of Evaluation Results

- C.1. *There will be different ways of giving evaluation results*
- C.1.1. *For the public:*
- a) *An overview about the laboratory evaluation results (distributions, anonymous list)*
 - b) *Demonstration of the test result variability – to show the instruments' suitability/reliability for commercial purposes, overall statements about accuracy and precision. The results from single laboratories will be anonymous for the*

- public.*
- *Variability between laboratories*
 - *Average variability in laboratories*
- C.1.2. *For each laboratory to demonstrate their proficiency to their customers: Simple, easily understandable data for the public evaluation of the laboratories. This will have to include a certificate for the year and/or testing history information.*
- C.1.3. *For each laboratory to enhance their test reliability: Detailed data for the benefit of the laboratories to enhance test reliability*
- C.2. *Content of the presentation of the results to the public: only anonymized information*
- *Table with the evaluation of all laboratories (anonymized)*
 - *Statistics for the evaluation of all laboratories, distribution diagrams of the evaluations (see attached Exel file)*
 - *Statistics and distribution of the results between the laboratories (based on 5x6 tests for each cotton for all laboratories)*
 - *Statistics and distribution of the in-laboratory deviations (based on 5 days of testing for each cotton in each laboratory)*
 - *Statistics and distribution of the deviations between single tests*
 - *... to be added ...*
- C.3. *Content of the presentation for each laboratory to demonstrate their proficiency to their customers*
- C.3.1. *The evaluation result for the average of all days and all 6 properties*
- C.3.2. *The evaluation result for the average of all days for each property*
- C.3.3. *All evaluation data will be given in comparison to the distribution of all laboratories to allow a comparison between the laboratories*
- C.3.4. *Information about the history of the evaluation for the previous Round Trials*
- C.4. *Content of the presentation for each laboratory to enhance their test reliability*
- *→ All evaluation data will be given in comparison to the distribution of all laboratories*
 - *→ The information should be as detailed as possible to allow individual evaluation and interpretation for the aim of enhancing test reliability*
 - *Evaluation of the deviations in the results of each single day and each cotton*
 - *Evaluation of the systematic influences on the results depending on the range of the properties (“trend”)*
 - *Information about the precision of the results*
 - *variability between single test results on the single days*
 - *variability between the averages of the different days*
 - *combined variability between single test results of all days*
 - *... to be added regarding the needs of the laboratories ...*

A second Pilot Round Trial was initiated at the Bremen meeting to verify the procedure. The results will be presented at the next CSITC Task Force meeting in September, 2006. Adjacent, the periodic work of the CSITC Round Trial will start in September 2006.

C) Definition of the International Co-operation

With the aim of enabling the laboratories to produce reliable test results and therefore with the aim of allowing cotton trade to base on reliable and comparable test results, the aspired international certification system for SITC test results includes these central aspects:

- Set-up of an international co-operation structure including international supporting partners, Regional Technical Centres in cotton producing regions and cotton testing laboratories
- Certification of test laboratories according to their test results with specific Round Trials
- Guidance / support to the laboratories to meet quality requirements

- Check of the laboratories for their laboratory practice

The first step to be covered is the certification of test laboratories with a suitable CSITC Round Trial system, described in the last chapter (B). For this purpose, regular round trials have to be conducted by involved international partners under the oversight of ICAC with its CSITC Task Force. Faserinstitut Bremen and USDA started to work on this topic. The appropriate structure can be seen in figure 1.

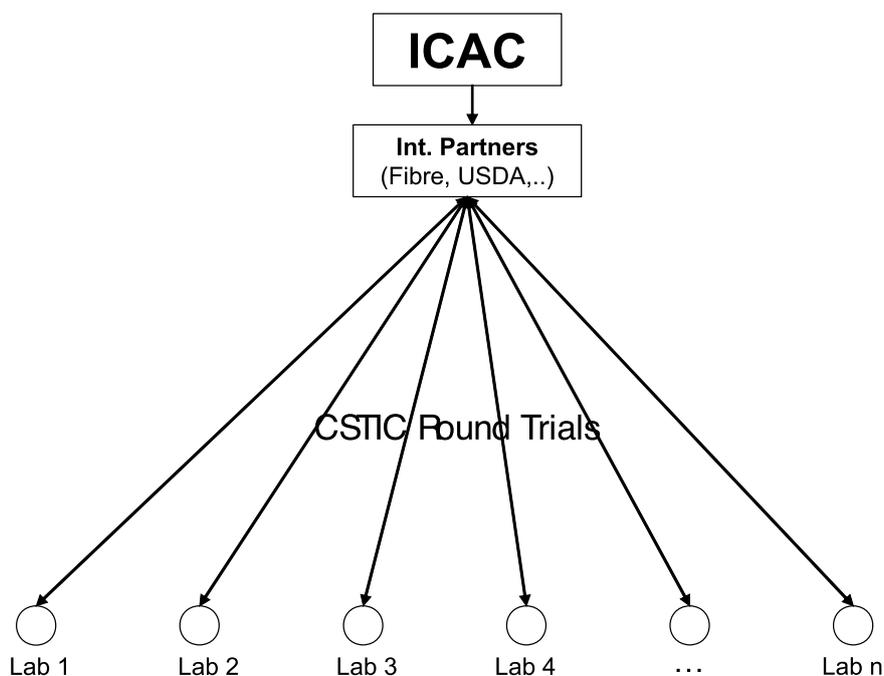


Fig. 1: Structure for CSITC Round Trial checks

For the support of the cotton testing laboratories, it is reasonable to include Regional Technical Centres in the structure (see figure 2). These Regional Centres will be supported and checked by the international partners, and will give support / check the regional laboratories. Again, this will be done under the oversight of ICAC. Laboratories, which are not covered by Regional Technical Centres, might be supported by the international partners. The realization of this step for regions in Africa is included in the planned full-fledged CFC project.

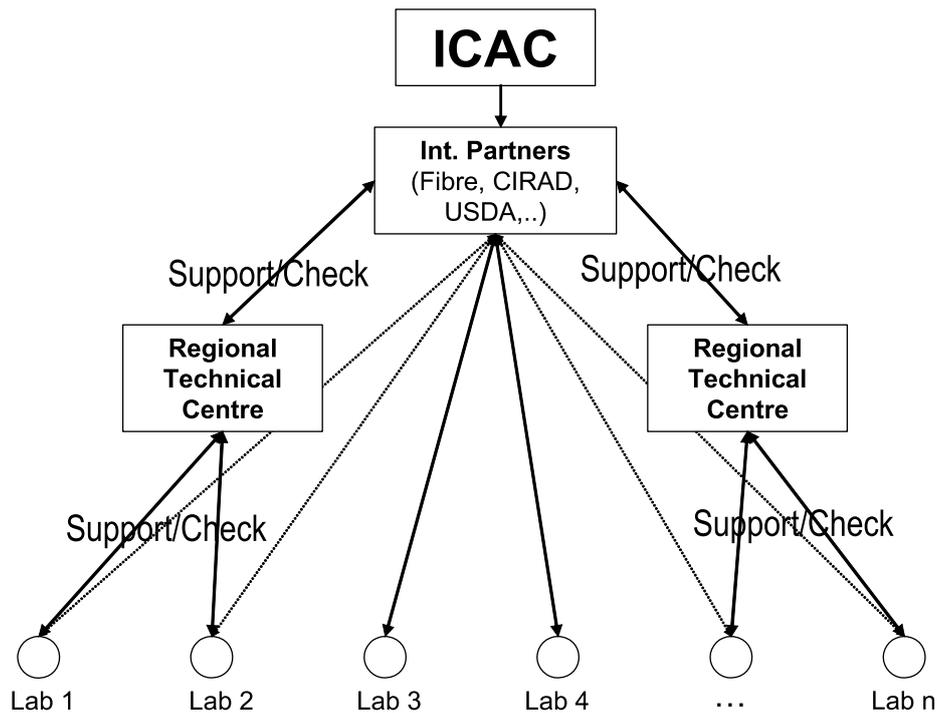


Fig. 2: Reasonable structure for CSITC laboratory support

The integration of auditing and certification procedures of the laboratory operational work with ISO principles or ISO-like principles including principles of Good Laboratory Practice, is an important aspect, but will at first not be tackled. Principally there are two different possibilities for the auditing of laboratories:

1. Auditing, specifically developed for cotton testing laboratories, realized by partners who are involved in the CSITC activities.
2. Auditing/Accreditation according to ISO 17025, accredited by the existing national accreditation bodies.

Although this task will not be addressed at this stage of work, the structure should nevertheless allow to include this topic. Figure 3 shows a suitable structure. The laboratories will get cotton testing related support to fulfil the requirements on quality management, but will be audited by independent national accreditation bodies. ISO accreditation will be an important step to prove laboratory quality management, but cannot be a substitute to the CSITC Round Trial to get their recognition in reliable cotton testing.

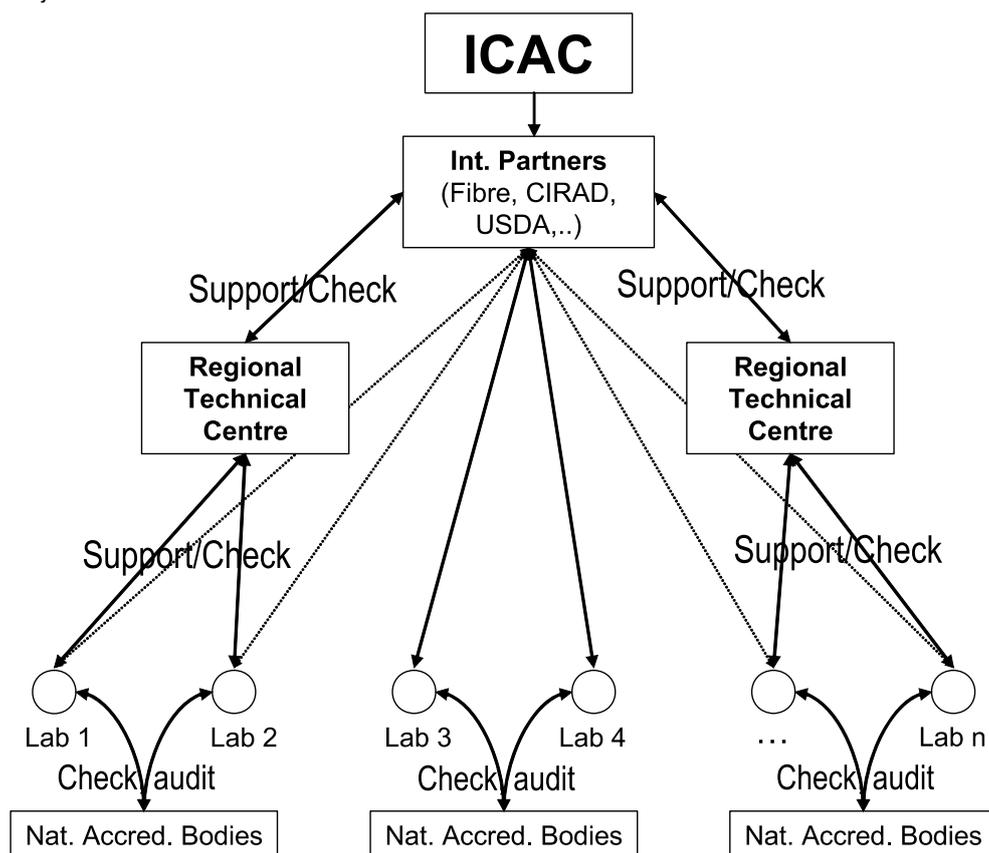


Fig. 3: Possible structure for the support and accreditation of cotton testing laboratories

D) Definition of Tasks for the Involved Partners

The routine work that is to be done by the Regional Technical Centres for the region covers mainly two activities:

1. Reference activities to prove the reliability of test results
 - reference measurements for cotton fibres (regional reference laboratory)
 - re-tests of samples tested in the laboratories
 - regional round trials with regional cottons
 - support for the participation of the cotton testing laboratories in the international certification.
2. Provision of information to run cotton testing laboratories with SITC instruments and to fulfil quality requirements
 - training
 - for cotton testing laboratories according to instrument testing and additional visual classing
 - for cotton testing laboratories on quality management and laboratory management
 - for staff in the cotton chain to realize the complexity of quality, its dependencies and its influences on the subsequent steps
 - experience and expertise for the laboratories for special questions
 - contact person for any testing related questions
 - detailed expertise for special topics
 - collection and dissemination of technical information (prepared in data bases)

- support the cooperation between the concerned partners in the different countries of the region.

Therefore additional regular work of the involved international partners will be:

- Evaluation of the cotton testing laboratories with the CSITC Round Trial (global)
- Assistance for the establishment and regular work of the regional support structure
- Training for the regional experts
- Periodical check of the Regional Technical Centres and their output regarding their international acceptance
- Reference measurements
 - Test of regional round trial samples
 - Re-check of the regional re-test samples
- Support/check for the regional training
- Expertise for the RTCs
- Assistance in expertise for the cotton testing laboratories
- Collection and dissemination of technical information
- Facilitate cooperation between the RTCs
- Support for laboratories and regions that cannot be fully supported by Regional Technical Centres

E) Criteria for Suitable Regions and Partner Institutions

For the establishment of regional structures, suitable regions and suitable partners have to be found.

Criteria for potential regions for Regional Technical Centres are:

- General: interest in the realization of commercial instrument testing of cotton
- General: demand for support
- Specific: sufficient amount of cotton production of the regions
- Specific: sufficient number of cotton testing laboratories / planned cotton testing laboratories
- Specific: homogeneity of the cotton production
- Specific: Existing co-operations between the countries in the planned region

Criteria for the choice of the partner institutions for Regional Technical Centres are - graded by their importance:

- Current political events, political stability, regulatory content of the hosting country
- Independency from particular competitive interests
- Existing knowledge/specialists in the different necessary fields of expertise
- Regional work without preference for specific countries
- Administration that is capable to include the organisation of the RTC (organisational ability)
- Existing equipment as demonstration objects for training and as reference instruments
- Transport infrastructure (airport, roads, telecommunication)
- Central location
- Common language for the region
- Easiness to welcome people around (e.g. lodging, training room)

F) Dissemination

The findings of this component were presented and discussed:

- at the CSITC Task Force meeting in Liverpool, September 25th, 2005

- at the CSITC Task Force meeting in Bremen, March 22nd, 2006, joint with the ITMF (International Textile Manufacturers Federation) International Committee on Cotton Testing Methods
- at the 482nd Meeting of the ICAC Standing Committee in Washington, March 30, 2006

Additionally a panel discussion was held at the 28th International Cotton Conference in Bremen on March 23rd, so that a broad range of stakeholders could get information about the work.

Principally, the CSITC topic shows such importance that is discussed at nearly all international meetings regarding cotton.

The results of this Fast Track project will be used for the future work of the CSITC Task Force and form the base for the planned full-fledged CFC project proposal, which was submitted to the Common Fund for Commodities in November 2005. A more detailed description of the topics can be found in the proposal. The proposal is published on the ICAC website (<http://www.icac.org/csitc/english.html>).

A summary of the planned project for the distribution to interested cotton stakeholders was prepared and will be distributed by the planned project partners. The summary and the full project proposal were translated into French to allow the distribution and discussion mainly in the francophone area of Africa.

Component 2: Identification of requirements and premises for an implementation of the certification system in Africa

The objective of component 2 was to gather the required information for a systematic and sustainable implementation of the certification system in Africa.

A) Survey

For this purpose, a preparation meeting was conducted in Montpellier from August 7 to 11 (FIBRE and CIRAD). A questionnaire was prepared in English and French and distributed to national experts in the different countries:

1. *Background information and demands, please describe:*
 - 1.1. *the actual national cotton production structure (from production to trading);*
 - 1.2. *the national classing structure (number of classing facilities, people, bales classed, ...);*
 - 1.3. *the actual sampling procedures (number of samples per bale, way of sampling, bale tagging, mode of transportation, ...);*
 - 1.4. *the actual instrumental classing structure (instruments, trained people, bales classed, ...);*
 - 1.5. *the actual problems and missing support according to classing;*
 - 1.6. *the future objectives according to instrumental classing;*
 - 1.7. *demands / wishes for Regional Coordination Centre according to classing (number of trained people per year, topics of training, ...).*
2. *Possible region for cooperation*
 - 2.1. *Please name existing regional co-operations according to cotton.*
 - 2.2. *Please name possible countries which could be partners for a regional cooperation in classing.*
 - 2.3. *Please name countries not possible for regional cooperation and name reasons (cultural, language, distances, ...).*
 - 2.4. *What is the maximum size of a region to have only one Regional Coordination Centre?*
 - 2.5. *Please name possible locations for a Regional Coordination Centre, their ranking and reasons for this ranking.*
3. *Possible candidates for Regional Coordination Centres*
 - 3.1. *Please name all possible candidates who could become / host a Regional Coordination Centre.*
 - 3.2. *What is the possible number of classing facilities being linked to / supported by this Regional Coordination Centre?*
 - 3.3. *For each candidate, please give information and ratings according to all points of the following list:*
 - 3.3.1. *logistical access (samples for testing and people for training) in the region,*
 - 3.3.2. *potential international work for the neighbour countries,*
 - 3.3.3. *conflict of interests due to active participation in cotton business,*
 - 3.3.4. *independency from the interests of local laboratories,*
 - 3.3.5. *possible access to the given administration of the candidate,*
 - 3.3.6. *public or private (without rating),*
 - 3.3.7. *regulatory context,*
 - 3.3.8. *availability of specialists in classing and/or quality management,*
 - 3.3.9. *availability of equipment according to classing.*
4. *Support by the Regional Coordination Centre*
 - 4.1. *What kind of support from a Regional Coordination Centre are you willing to fund?*
 - 4.1.1. *Training: what kind? How many people? How often?*
 - 4.1.2. *Assistance, what kind/topic?*
 - 4.1.3. *Reference check, what kind (round trials, re-tests, ...)?*
 - 4.1.4. *Other: specify.*
 - 4.2. *How many people are needed and what should their experience be*
 - 4.2.1. *Various expert?*
 - 4.2.2. *Technician?*
 - 4.2.3. *Instrument operator?*
 - 4.3. *Which instruments should be available at the Regional Coordination Centre?*
5. *Operational costs*

- 5.1. *Which organizations should have to pay in the region for the work of the Regional Coordination Centre?*
- 5.2. *How much is your company / organization able and willing to pay for the work of the Regional Coordination Centre (on a yearly basis)?*
- 5.3. *Additionally, should it be direct payment for direct service (training, direct assistance, ...)?*
6. *Regional testing facility*
 - 6.1. *Would it be useful to install a regional testing facility to replace or complement the national instrumental testing facilities?*
 - 6.2. *How many samples from your company would be tested in this facility based on a cost-recovery invoicing?*

A workshop was conducted in Dar es Salaam, Tanzania, in September, with the support of the Tanzania Cotton Board (TCB). For this purpose, experts came from Tanzania and Mozambique and some organizations were visited during the time in Dar es Salaam. Additional experts were interviewed during the ICAC Plenary Meeting in Liverpool in September. Answers to the questionnaire and/or the questions for East and Central Africa were given (either in written form or in discussions) by one or multiple experts from the following countries (approx. 30 persons):

- African boards:
 - African Cotton Association ACA
 - African Cotton & Textile Industries Federation, ACTIF
- Chad: Cotontchad
- Ethiopia: Ethiopian Agricultural Research Organization
- Kenya: Department of Textile Engineering; ACTIF
- Mozambique: Mozambique Institute for Cotton
- South Africa: CSIR; Cotton South Africa
- Sudan: Sudan Cotton Company; Gezira Research Station
- Tanzania: Tanzania Cotton Board, Tanzania Bureau of Standards, Wakefield Inspection Services (Tanzania) Ltd., Cargill Tanzania Ltd., Buluba Ginners Ltd.
- Uganda: Cotton Development Organisation
- Zambia: CDT; Dunavant; High Commission of the Rep. of Zambia in Dar es Salaam; Royal Netherlands Embassy
- Zimbabwe: Cotton Company of Zimbabwe Ltd.

For West Africa, the information about the countries in the UEMOA region was obtained during a mission for another project, the UEMOA/UNIDO/EU Quality Program ("Mise en place d'un système d'accréditation, de normalisation et de promotion de la qualité") and the additional cotton specific activities of the project. The mission was conducted in July/August 2005 in Benin, Burkina Faso and Mali and included interviews with approx. 100 cotton production and processing experts from 27 organisations/bodies:

- DPQC (Direction de la Promotion de la Qualité et du Conditionnement des Produits Agricoles, Cotonou, Benin)
- SONAPRA (Société Nationale pour la Promotion Agricole), Direction Générale, Cotonou, Benin
- MICPE (Ministère de l'Industrie, du Commerce et de la Promotion de L'Emploi) en compagnie de DC du MAEP, Cotonou, Benin
- Dunavant, Cotonou, Benin
- SGS Benin SA, Cotonou, Benin
- AIC (Association Interprofessionnelle du Coton), Cotonou, Benin
- ACA (African Cotton Association / Association Cotonnière Africaine), Cotonou, Benin
- 2 spinning mills (CBT, SITEX), Lokossa, Benin
- SONAPRA Usine d'Egrenage Parakou 2, Parakou, Benin
- SONAPRA Direction Regionale, Parakou, Benin
- SONAPRA Salle de Classement, Parakou, Benin

- (INRAB, Parakou, Benin)
- CERPA (Centre régional pour la promotion agricole), Parakou, Benin
- Spinning mill COTEB (Complexe Textile du Benin), Parakou, Benin
- UEMOA / Conseiller Technique Principale du Programme Qualité, Ouagadougou, Burkina Faso
- Ministères responsables du Coton, Ouagadougou, Burkina Faso
- Sociétés Cotonières (SOFITEX, SOCOMA, Faso Coton), Ouagadougou, Burkina Faso
- INERA (l'Institut de l'Environnement et de Recherches Agricoles), Bobo Dioulasso, Burkina Faso
- SOFITEX Gin and Classing Bureau, Bobo Dioulasso, Burkina Faso
- FILSAH (Filature du Sahel S.A.) spinning mill, Bobo Dioulasso, Burkina Faso
- Classers, Koutiala, Mali
- CERFITEX (Centre de Recherche et de Formation pour l'Industrie Textile), Ségou, Mali
- COMATEX (Comagnie Malienne des Textiles S.A.) Spinning mill, Ségou, Mali
- CMDT Ginning directors, Koutiala, Mali
- CMDT Chief Classers, Koutiala, Mali
- CMDT Directeur Commercial, Bamako, Mali
- Direction Nationale des Industries, Bamako, Mali

Due to this mission, which was planned and executed between the submitting of the CFC/ICAC FT proposal and the project starting date, it was not necessary to execute a second workshop in West/Central Africa. The African Cotton Association (ACA) as a project partner was involved by an interview with its President, Mr. Malloum, during the ICAC Plenary meeting in Liverpool.

The answers given to these or similar questions were directly used to form the full-fledged project proposal.

B) Laboratories / Test Instruments in the Regions

The following list is based on the answers from different interviewed partners. This list will have to be verified by directly contacting all responsible organisations in the countries. This will be one task in the full-fledged project.

- | | | | |
|------------------|-------------------------|--|----------------------|
| • Benin | | | |
| ○ SONAPRA | production | | 2 SITC |
| ○ SGS | control | | 1 SITC |
| ○ Dunavant | trade | | 1 SITC |
| • Burkina Faso | | | |
| ○ SOFITEX 1 SITC | production | | 1 SITC |
| • Cameroon | | | |
| ○ SODECOTON | production | | SITC testing planned |
| • Chad | | | |
| ○ Coton Tchad | production | | 2 SITC |
| • Egypt | | | |
| ○ several | Spinning mills, control | | approx. 10 |
| • Ethiopia | | | |
| ○ no SITC | | | |
| • Ghana | | | |
| ○ | | | 1 SITC* ¹ |
| • Ivory Coast | | | |
| ○ CIDT | production | | 3 SITC* |

*¹ Verification for this number is necessary, as different answers were given

○ L'AIGLON	trade	1 SITC*
• Kenya		
○	spinning	2 SITC*
• Mali		
○ CERFITEX	RTC work and production	1 SITC planned (CFC-CSITC)
○ CMDT	production	1 SITC
• Mozambique		
○ IAM (Mozambique Cotton Institute)	Production/research	SITC testing planned
• Nigeria		2 SITC*
• Senegal		
○ SODEFITEX	production	1 SITC
• South Africa		
○ Cotton SA	production	3 SITC
○ Clark Cotton	production, trading	1 SITC
○ CCS		1 SITC
○ Mills, trading	trading and spinning	approx. 10*
• Sudan		
○ ARC	Research and production	1 SITC
○ SCC	production	1 to 2 SITC
• Tanzania		
○ TBS	RTC work and production	1 SITC planned (CFC-CSITC)
○ TCB 1 SITC	production	1 SITC
○ WIS 1 SITC	control	1 SITC
• Togo		
○ SOTOCO	production	1 SITC
• Uganda		
○ CDO	production and control	1 SITC
• Zambia		
○ Dunavant	trade	2 SITC
• Zimbabwe		
○ Cotco	production	4 SITC
○ Dunavant	trade	1 to 2 SITC*
• Additionally SITC instruments are used in Tunisia, Morocco, Lesotho, Mauritius		

The emphasis of the project will be on the classing laboratories for cotton production ("production"). Additionally interested laboratories are working in the fields of cotton research, production control and in trade.

C) Typical Problems in the Cotton Testing Laboratories

The following list of typical problems or necessities that are difficult to achieve is based on the answers from different interviewed partners and the visit of some laboratories during the workshop/mission:

- Availability of testing instruments (purchase price)
- Service/maintenance of the instruments
- Ability of fast technical support services for trouble shooting
- Availability of proper laboratory surrounding: suitable rooms with sufficient insulation, protection against sun
- Air conditioning: closely controlled humidity and temperature
- Regular and independent monitoring of humidity and temperature

- Regular constant power supply without breakdowns and without power fluctuations
- Availability of valid calibration material
- Availability of trained test persons
- Knowledge in laboratory quality management
- Possibility to compare to reference testing labs
- Possibility to participate in sufficient round checks
- Discrepancy between manual and instrument test results

D) Market Advantages – Benefits and Beneficiaries

The planned full-fledged project is, in its global part, designed to facilitate cotton trading by providing a commercially acceptable system for the instrument testing of cotton. On the basis of reliable cotton test results an equitable trade based on the inherent cotton quality is possible.

Cotton producing countries, especially developing countries will be enabled to sell their cotton based on reliable and comparable test results, so that their cotton production can be directly compared to cottons from higher developed countries with existent cotton quality control systems. Special advantages of the different origins (as e.g. reduced trash content or higher and more uniform maturity caused by hand-picking) can be evaluated independently from the basic cotton characteristics. Indiscriminative price discounts due to unproven test results can be avoided. The benefit is given by several reasons:

- avoiding price discounts due to unknown properties
- higher achievable prices (due to recognised/proven premium quality bales)
- less claims (due to proven measured properties brought by the testing in order to prepare the selling contract)
- possibility to secure a market of customers for a recognised quality of fibres and to improve the market share to new customers
- check of manual/visual classing in case of discrepancies
- higher selling volume compared to not instrumentally classed cotton – this advantage will become even more important in the following years based on the global increase of instrument testing
- help in direct selling to cotton importing countries (e.g. online trade)
- central importance for quality management of the cotton and textile value added chain
 - option for proper gin setting
 - testing for research, breeding
 - option for bale selection and efficient yarn production in spinning mills

Most of the benefits by instrument testing of cotton can not be evaluated for their direct monetary impact. Nevertheless it is possible to get some answers to the monetary benefit of instrument tested cotton compared to not instrument tested cotton.

For this project, the monetary benefit of achieving a higher price for instrument tested cotton was estimated by different sources and at different dates, so with basing on varied price and market conditions

1. Uster, unofficial notice, based on estimations in Uzbekistan 1990: 20 US-ct/kg
2. ICAC, unofficial notice, based on conversations with merchants: 4.4 US-ct/kg
3. CIRAD, net benefit based on an evaluation in Benin 1994: 1.5 US-ct/kg, meaning a gross benefit of 3.5 US-ct/kg
4. Wakefield Inspections, based on their experience in Brazil: 2.7 US-ct/kg

These numbers show a high deviation. Nevertheless it is possible to come to a conclusion of about 3 to 4 US-ct/kg. Based on 3 US-ct/kg, it will be 6.90 USD/bale. The costs for testing have to be subtracted from this. For Africa, an indicative testing price of 2.50 USD per bale can be estimated. So, after deductions, the following monetary benefit can be stated:

• For each bale:	•USD 4.40
• For the yearly cotton production of Tanzania (100,000t)	•USD 1,900,000 per year
• For the yearly cotton production of Mali (250,000t)	•USD 4,750,000 per year
• For the yearly cotton production of West Africa (800,000t)	•USD 15,200,000 per year

E) Choice of Regions

The countries with a cotton production higher than 10,000 tons in Africa are (2004/2005)¹:

- West Africa (UEMOA)
 - Burkina Faso 263,000 tons
 - Mali 241,000 tons
 - Benin 174,000 tons
 - Ivory Coast 145,000 tons
 - Togo 75,000 tons
 - Senegal 18,000 tons
- East / Southern Africa
 - Tanzania 100,000 tons
 - Zimbabwe 75,000 tons
 - Zambia 75,000 tons
 - Uganda 41,000 tons
 - Mozambique 26,000 tons
 - Ethiopia 23,000 tons
 - South Africa 21,000 tons
- Other regions
 - Egypt 292,000 tons
 - Cameroon 124,000 tons
 - Sudan 114,000 tons
 - Nigeria 95,000 tons
 - Chad 80,000 tons

The number of Regional Technical Centres to be established for the planned project is restricted due to the operability of the project, the aimed self financing status of the Regional Technical Centres (RTCs) and the limited project funding. Therefore it is not possible to support all cotton producing countries to the same extent. However, in regions, where it is not feasible to start a RTC in the first step, it will be possible to get a) basic support for the cotton testing laboratories by the RTCs in the chosen regions and to get b) support by the international expert bodies involved in this project.

The highest cotton production can be seen in West Africa. Eight countries including six major cotton producing countries are cooperating in UEMOA, additional cotton producing countries such as Ghana and Nigeria are in the region, so that the total annual cotton production is more than 700,000 tons.

Based on these countries with French as their common language, Benin, Burkina Faso and Mali are the most likely countries for a RTC. Togo and Ivory Coast were disregarded because of safety reasons. Senegal was disregarded because of the non central location and the relatively low cotton production. Nigeria and Ghana, which are not members of UEMOA, were disregarded because of their different na-

¹ ICAC, September 2005

tional language and as they are not included in the close cooperation given between the UEMOA countries.

Another cotton production zone can be seen in Southern/East Africa, including Ethiopia, Mocambique, Tanzania, Uganda, Zambia, Zimbabwe and, with a minor production, e.g. Kenya and Malawi. Due to the total amount of the cotton production (approx. 300.000 t per year) it was not possible to divide up between Southern and Eastern Africa with each one having a RTC. Therefore a possible additional assistance from South Africa to the Southern African countries can be included in this project, at first compensating the work from the RTC.

Egypt is mainly and Sudan is partly producing Extra Long Staple cottons. Instrumental testing of ELS cottons is not comparable with testing usual cotton varieties. In the CSITC Task Force, ELS cottons are not regarded up to now. Consequently, Egypt and Sudan are not forming a region for a RTC at first, but the upland cotton production might be included in the CSITC structure. These countries might therefore be supported by the East African Regional Centre and by the involved international expert bodies.

In Central Africa, Chad and Cameroon (and Nigeria, based on the definition of the region) are the main cotton producing countries. Because of the infrastructure, it is difficult to include the countries in the West African region. On the other hand, the cotton production of these countries and the number of cotton testing laboratories is not sufficient to ensure a financially sustainable operation of an own RTC after the end of the CFC funded project. Therefore, assistance for these countries is intended to be given from the West African RTC and from the involved international expert bodies. With the experience obtained in this project, it will be possible to evaluate the benefit and the sustainability of a RTC for Central Africa after the end of this project.

Regarding the planned financial sustainability of the Regional Technical Centres, only 2 RTCs were regarded. Any segmentation of the planned regions at this stage will result in regions that will not allow financial sustainability.

On the other hand, it might be possible to cover additional regions with additional RTCs later, based on a rising number of laboratories and therefore a rising demand for assistance by RTCs. This will have to be considered for additional regions in Africa as North or Central Africa. Additionally the experience from this project can be used to take up comparable actions in other regions in the world as South America, India or East Asia.

F) Choice of Partner Institutions

The support structure in the planned project is based on the findings in component 1 (see figure 4). The support structure will be open for other regions.

The choice of the partner institutions for Regional Technical Centres (RTCs) is based on the criteria named in component 1 of this report. The chosen regions and partners are demonstrated in figure 5. Based on the chosen regions and partners, the countries with full support from the RTCs are marked in red (medium grey), and the countries with partial support are marked in light red (light grey).

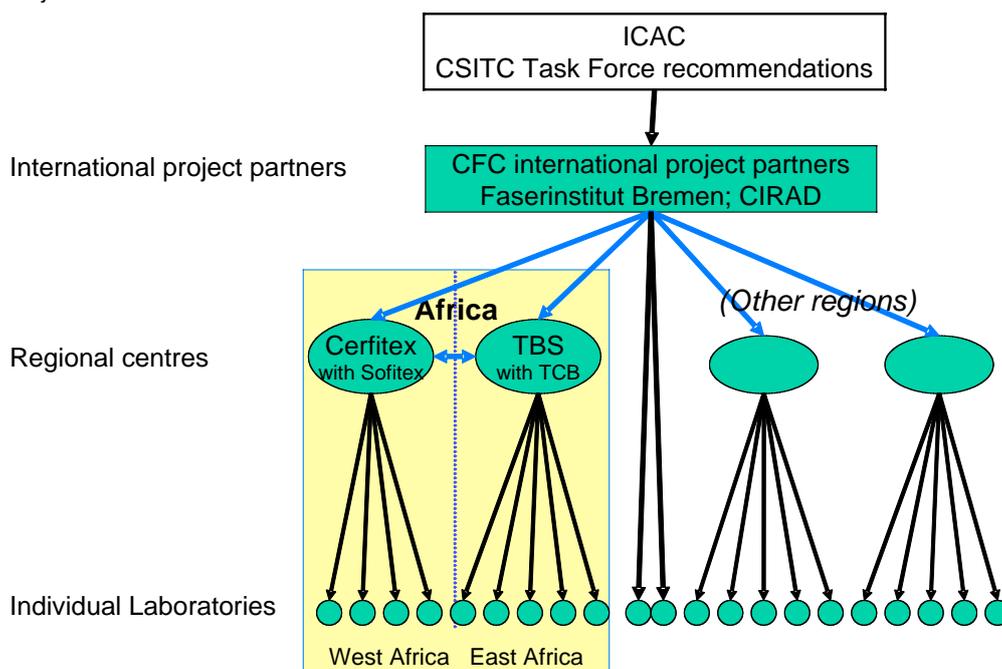


Fig. 4: Support Structure

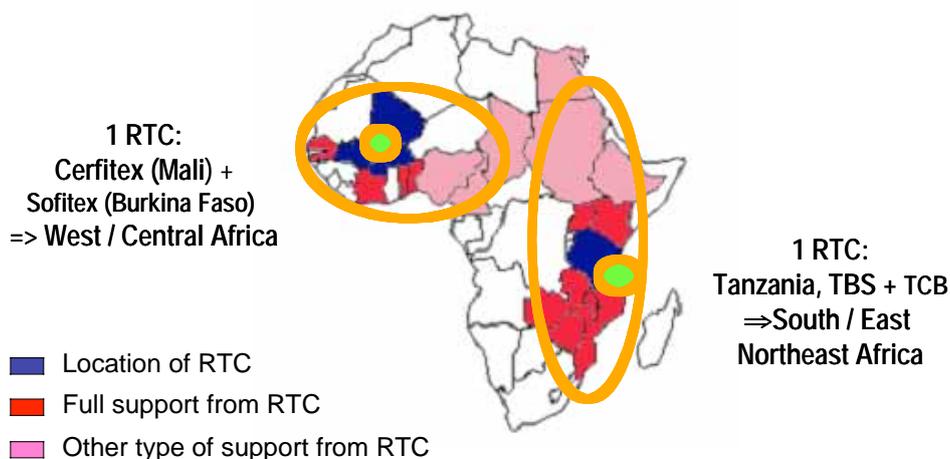


Fig. 5: Regions and partners

F1) West Africa

CERFITEX in Ségou, Mali, shows the following advantages that resulted in the involvement in this proposal:

- Independency from particular competitive interests
- Existing basic equipment and basic knowledge for cotton testing, but not including an operating SITC instrument up to now
- Sufficient laboratory space for the installation of SITC equipment
- Existing experience in and best prerequisites for training for the region
- Existing ideas/knowledge for the establishment of a Regional Centre for the UEMOA region

In order to include intense knowledge in everyday cotton classing and instrumental testing, **SOFITEX** with its classing office in Bobo Dioulasso, Burkina Faso, is involved in the planned West African RTC. SOFITEX shows

- Intense knowledge in ginning, manual classing and instrumental testing
- International training for classing
- Existing equipment for SITC cotton testing
- Knowledge in quality management and its requirements
- Experience in training for the region

With the combination of the RTC at CERFITEX and the added knowledge from SOFITEX, it is possible to achieve independency and experience. SONAPRA in Benin, which shows similar advantages as SOFITEX, was not chosen because of the significantly higher distance between both partners. The choice of partners for West Africa is corresponding to EU/UNIDO/UEMOA studies done for the cotton value added chain from cotton production to textile production.

Concluding, for West Africa, CERFITEX was chosen as the best hosting partner for establishing the RTC. With its knowledge, regional acceptance and independence, it will be possible to assure the uninfluenced support and check of the regional laboratories and the best prerequisites for the training of concerned people. SOFITEX is chosen as a second partner that can assure the reference to given national classing and classing structures and with this the maximum benefit for the cotton business. Only the combination of both partners safeguards to achieve the attended aims in and for the region.

F2) Southern/East Africa

The best prerequisites for the Southern/East African RTC were found in Tanzania, especially Dar es Salaam. Tanzania possesses a nationally organised instrumental cotton testing structure. In Dar es Salaam, there is an advantageous constellation with the possibility to include TBS and TCB as direct partners.

The **Tanzania Cotton Board (TCB)** is responsible for the total manual classing and instrument cotton testing in Tanzania and therefore exhibits knowledge in everyday cotton testing and production control. TCB was already included in CFC work. The **Tanzania Bureau of Standards (TBS)** is, as Tanzania's sole standards body, responsible for the quality assurance in industry and commerce. TBS exhibits intense knowledge in measurement and quality management in measurement, in calibration and in training for laboratories. Based on their daily work, TBS is able to check laboratories and laboratory practice for different products, including textiles. TBS is totally independent from the cotton business, cotton promotion and from particular cotton testing laboratories. The combination of these two partners shows the same advantages as mentioned for the partners in West Africa. Additional reasons for the choice of Tanzania / Dar es Salaam were:

- Tanzania is one of most important cotton producing countries in Southern/East Africa
- Surpassing location for cotton testing with its harbour as one of the main cotton harbours in East Africa
- International airport
- Wakefield Inspection Services in Dar es Salaam is a laboratory from the internationally operating WIS company, utilising SITC equipment for cotton quality control, can be involved for an independent inspection of the RTC work

Concluding, for East Africa TBS is the chosen partner for hosting the RTC, as it exhibits intense knowledge in measurement and quality management in measurement, in calibration and in training for laboratories, and as they are totally independent from cotton business. TCB, being responsible for Tanzania's national cotton classing, will be the second partner to assure the optimal cotton specific implementation in and for the region.

Zambia was not regarded, as the government has no institutional interest in cotton, as the existing instrumental cotton testing is mainly done by private cotton trading companies, and as the location does not exhibit the road network of typical cotton harbours. Zimbabwe was not chosen mainly because of the political situation and the non central location. Kenya and Malawi were not regarded due to their low cotton production. Mozambique was not regarded because of the lack of SITC testing structure and the language, being different to a majority of the countries. Uganda showed interest in the participation in the CSITC system, but not in conducting RTC work. South Africa was not included as a direct partner for a RTC, as it is not a member of the Common Fund for Commodities.

G) Tasks for the Regional Technical Centres – Including Testing Laboratory Work

Both RTCs will be equipped with an SITC instrument and with the necessary equipment to form an exemplary laboratory. The RTC laboratory will fulfil the following tasks defined in component 1 (see component 1 – chapter D):

- Reference activities to prove the reliability of test results
- Provision of information to run cotton testing laboratories with SITC instruments and to fulfil quality requirements

Additionally the given infrastructure of the established RTCs can be used to perform instrument testing for the regional cotton production. This item is not meant in competition to existing cotton testing laboratories, but for countries without SITC instruments, as they can avoid buying these instruments, and for countries with SITC instruments, as the RTC can fill gaps in the testing capacity of the national laboratories.

The work as testing laboratory for the regional cotton production is an important aspect to achieve financial sustainability of the established RTCs after the end of the project.

H) Requirements for the Regional Technical Centres

The necessary equipment for each RTC will be:

- SITC instrument
- Ambient air management system (temperature and humidity control)
- Temperature and humidity recorder
- Computer, projector, printer etc.
- Constant power supply
- Classing tables, calibration material

The necessary personnel for each RTC during the project time will be:

- Approx. 1.5 Regional Experts with an adequate schooling (MSc or equivalent)
 - The regional experts will be the key for the sound procedure of the RTCs and the project.
 - The expert in the hosting bodies (CERFITEX, TBS) will be involved up to full-time work – depending on unavoidable works for the hosting body.
 - The expert from the co-operating bodies will continue work for their bodies (SOFITEX, TCB), and will spend about half of their working time for the RTC.
 - Both experts will give trainings and expertise, but mainly the expert of the hosting body including the reference laboratory will do additional work as laboratory head and for managing the project. To regard full time operational ability of the RTCs during missions of one expert, the second expert will act in place of him.
 - The Regional Experts will be trained intensively from multiple international bodies according to cotton production and cotton quality, SITC testing, quality management.

- Approx. one skilled SITC operator with adequate schooling (technician / superior technician) not only to operate the SITC, but to understand and manage classing, basic instrument maintenance, and additional work for e.g. conducting and evaluating the regional round trials. With a rising number of cotton re-tests and testing for the cotton production, the number of operators is extensible.
 - The SITC operator will be trained by the regional experts and will get additional knowledge by the direct exchange to technicians/operators from the other involved laboratories
- Part-time involvement of a managing employee of the hosting body to assure the proper involvement of the RTC in the hosting body.
- Part-time involvement of staff for the project administration (accountant and secretary), based on their regular work for the hosting body.
- Involvement of the necessary daily workers for driving, sample preparation, guarding etc., based on the staff of the hosting body.

1) Costs and Cost Recovery

The estimated costs for the installation and running of the RTCs (including the laboratory work) during the full-fledged project are described in detail in the according budget. In sum, the costs for each RTC in the project are approx. 1.1 mio USD.

Regarding the financial sustainability of the Regional Technical Centres, these sources of income will be given after the end of the planned project:

- direct fee for training (the fee will be paid by the demanding laboratory or organisation)
- direct fee for on-site expertise/inspection
- direct fee or yearly payment for re-test of samples tested in the laboratories
- direct fee for the instrument testing of a part of the cotton production in the region

All named sources of income for the RTCs will be directly profitable for the laboratories in the region:

- Training costs from the RTCs will be lower than training costs at international bodies (like American Cotton Shippers Association (International Cotton Institute))
- Fees for consultations, expertise and technical support will be lower than international expertise or support (however, the international expert bodies will have a close look to the performance of the RTCs in their provision of services to the laboratories, and will perform periodic training to RTC trainers to keep them informed about the latest knowledge)
- The fees for the re-test of samples will be unavoidable for the laboratories to prove their ability to provide reliable test results
- The instrument testing of the cotton production in the RTCs will be beneficial to
 - countries without SITC instruments, as they can avoid buying these instruments and their surrounding necessary equipments
 - countries with SITC instruments, as the RTC can fill gaps in the testing capacity of the national laboratories.

The costs of the RTCs can be adapted to the amount of work in the RTCs:

- the minimum engagement of the regional experts is a part-time engagement, as the RTCs are linked with existing bodies
- the engagement of SITC operators can be synchronised with the number of tests to be done
- the administration of the RTCs can be minimised as the RTCs are linked with existing bodies

The costs and the income of the RTCs depend on the number of laboratories benefiting from the RTC and from the tasks demanded by the laboratories (as these will have to pay fees for the services they get from the RTCs). Laboratories/ classing offices, their companies and the governments will demand the services due to the given added value to cotton.

For illustrating the financial sustainability of the RTCs, an estimation is given based on the following assumptions:

- 1 regional expert in full time is planned for regional training and expertise as well as for laboratory management
- It will be necessary to engage one well skilled SITC operator / technician for the whole year despite of a limited harvesting period
- Administrational staff and daily workers have to be included
- Typical running costs and repair costs are considered
- The number of retests will be levelled to 0.5% of the bale production in the region (starting with SITC testing of 10% and 5% of retest, going up to 50% of SITC testing with 1% of retest), in sum 18,000 bales per season.
- The number of SITC tests for the regional production is expected to reach about 12,000 tested bales per year. With a higher number of bales to be tested, additional SITC operators with less salary can be added, increasing the monetary benefit. The SITC instrument is capable to test up to 150,000 bales per year.
- Training and expertise are considered to serve 10 laboratories in the region
- Expertise will be demanded by every laboratory every second year for 2 days
- Training will be done for 10 trainees per year

Yearly expenses of one RTC		
Cost	unit price, USD	sum USD
Regional expert (1/1)	30000	30000
Skilled SITC operator/technician (1/1)	20000	20000
Administration (1/2)	8000	4000
Daily worker (1/1)	6000	6000
Running costs (SITC, electricity...)	10000	10000
Repair costs, spare parts (SITC, add. equipment)	5000	5000
Sum		75000

Costs of transport of samples to the RTCs have to be defrayed by the laboratories. Costs for sample storage are not included in this estimation.

Yearly Income of one RTC				
Source of income	amount	unit	unit price USD	sum USD
Training	10	persons/year	1600	16000
Expertise	10	days/year	200	2000
Round Trial	10	laboratories with 6RT/year	250	2500
Retest	18000	samples	2	36000
Testing of cotton production	12000	samples	2	24000
		Sum		80500

Based on the modest assumptions named above, the RTCs will be self financing. With increasing number of tests the net income will be higher.

Additionally to the named direct sources of income, there will be the national interests of the countries in the region to accompany the work of the RTCs, as the RTCs are directly improving the monetary benefit of the national cotton productions in the region.

J) Full-Fledged Project Proposal, Project Meetings

Based on the mentioned findings in this Fast Track project, it was possible to develop a full fledged proposal with the title: "Commercial Standardisation of Instrument Testing of Cotton for Cotton Producing Developing Countries in Africa" in close cooperation between Faserinstitut Bremen and CIRAD. The proposal was submitted to the CFC in November 2005.

Project Title	Commercial Standardisation of Instrument Testing of Cotton for Cotton Producing Developing Countries in Africa
Duration	4 years
Location	West Africa (including Central Africa) – represented by Mali/ Burkina Faso; East Africa (including Southern Africa) – represented by Tanzania; Germany, France
Estimated total cost	7.8 mio USD
Submitting institution	International Cotton Advisory Committee (ICAC)
Project Executing Agency	Faserinstitut Bremen e.V. (FIBRE), Germany
Additional Participating Agencies	ICAC, Washington CIRAD, France TBS TCB CERFITEX SOFITEX
Supervisory Body	ICAC
Duration	4 years
Estimated Start Date	July 2006
Financing sought from the Fund	5 mio USD

The estimated total cost- according to the project partners¹ -

¹ The numbers are only approximate and might be changed during the further editing of the proposal

Project partners	Source	
ICAC	contribution	2 115 USD
ICAC	by CFC	150 000 USD
FIBRE	contribution	654 743 USD
FIBRE	by CFC	1 382 388 USD
CIRAD	contribution	316 964 USD
CIRAD	by CFC	526 502 USD
CERFITEX / SOFI TEX	contribution	110 044 USD
CERFITEX / SOFI TEX	by CFC	1 261 632 USD
WA labs	contribution	0 USD
WA labs	by CFC	145 908 USD
TBS / TCB	contribution	108 280 USD
TBS / TCB	by CFC	1 388 039 USD
EA labs	contribution	0 USD
EA labs	by CFC	180 227 USD
External	contribution	1 561 209 USD
Total		7 788 052 USD

The estimated total cost - according to categories -

Category	Total Cost	CFC Contribution	Counterpart
I Vehicles, Machinery and Equipment	1.909.900 USD	1.551.900 USD	358.000 USD
II Civil Works	0 USD	0 USD	0 USD
III Materials and Supplies	210.000 USD	18.000 USD	192.000 USD
IV Personnel	3.482.612 USD	1.876.933 USD	1.605.680 USD
V Technical Assistance and Consultancy	359.990 USD	200.158 USD	159.832 USD
VI Duty Travel	1.146.002 USD	854.743 USD	291.259 USD
VII Dissemination and Training	304.298 USD	202.963 USD	101.335 USD
VIII Operational Costs	225.250 USD	180.000 USD	45.250 USD
PEA Sub-total	7.638.052 USD	4.884.697 USD	2.753.355 USD
IX Supervision, Monitoring and Evaluation	150.000 USD	150.000 USD	0 USD
X Contingencies	included	included	included
Grant Total	7.788.052 USD	5.034.697 USD	2.753.355 USD

The full proposal is published on the ICAC website (<http://www.icac.org/csitc/english.html>).

The following meetings between the project partners were initiated regarding the proposal and the planned project:

- Meeting for the preparation of the project in October 2005 in Bremen: Faserinstitut Bremen and CIRAD
- First meeting with project partners from the planned Regional Technical Centres in February 2006 in Bremen: Faserinstitut Bremen, CIRAD, TBS, CERFITEX
- Meeting with project partners from all involved project partners: Faserinstitut Bremen, CIRAD, CERFITEX, TBS, TCB, ICAC. In Bremen on March 24th – given as in-kind contribution from all partners.