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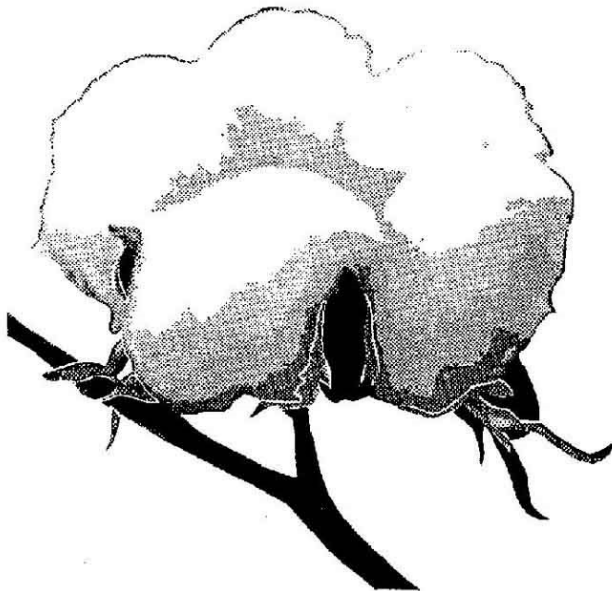
Lab of the Bremen Cotton Exchange

Commercial Standardization of Instrument Testing of Cotton for the Benefit of Africa

Axel Drieling

Faserinstitut Bremen e.V.
(Fibre Institute Bremen)

Annual Congress
Of the ACA
Khartoum, Sudan
March 10-12, 2011





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Content:

Benefit of Instrument Testing for Africa

The CFC/ICAC/33 Project „CSITC Project“

Comparison of Instrument Testing Performance in Africa and
Worldwide

Current Developments in Instrument Testing in Africa



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The Benefit of Instrument Testing for Africa



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The Quality of Cotton



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It is important to obtain reliable information about the actual quality of cotton

- Cotton growers need the information
 - to obtain an equitable price for the cotton
 - to enhance cotton quality (breeding/research)
- Ginning needs the information
 - To optimise the ginning process
- Trading needs the information
 - to fix the price of cotton
 - to satisfy the customers
 - To avoid claims
- Cotton spinners need the information
 - to assure a properly running process
 - to achieve the required quality of yarn
 - to minimize the raw material costs

Manual/Visual Classing

- Manual Classing is a common method for estimating the quality of cotton
- Manual Classing is the actual basis for trading cotton
- But Manual Classing is
 - not sufficiently objective
 - not sufficiently reliable / precise
- Global cotton trading is more and more accepting and demanding instrument test results
- Cotton spinning requires instrument test results, not Manual Classing results





Uster



Premier

Standardized Testing → High Volume Testing

- All important quality parameters are tested
- Objective, reliable test results
- High speed testing, capable for testing every single bale
- High Volume Testing Instruments from various manufacturers
- Additionally: Low volume testing for detailed information (not considered here for the cotton production)

The worldwide accepted and demanded way for the evaluation of cotton quality is inevitably moving towards High Volume Instrument testing

- Classing of the cotton production is shifting from manual classing to instrument testing worldwide
- Spinning mills are using HVI results regularly
- Research is using HVI results regularly
- Trade is moving towards HVI results to fulfil customers demands

Currently, in Africa less than 10% of the cotton bales are tested with High Volume Instruments, but many countries are stepping towards instrument classing





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Benefits of Instrument Testing



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- Benefits of instrument testing for selling cotton
 - Ability to name the objective quality of the country's cotton production
 - Offer cotton with known quality for sale
 - Avoid price discounts due to unknown properties
 - Avoid claims
 - Secure/improve the market share
 - Use of the test results in the whole textile value added chain
 - Monetary benefit regarding higher achievable prices:
approx. 3 US-ct for each kg of lint



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Benefits of Instrument Testing



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- Benefits of instrument testing for producing cotton
 - Arrange homogenous lots for sale
 - Optimize quality
 - in breeding
 - in ginning
 - Pay farmers based on the quality their produce
- Benefits of instrument testing for cotton processing
 - Optimize cotton input for demanded yarn quality: economic use
 - Arrange bale laydowns



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The CSITC Project



CSITC Project

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Based on the recommendations of the CSITC Task Force,
and to facilitate the work that is necessary to fulfil the CSITC
objectives, a project was created:

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

CFC/ICAC/33



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CSITC Project

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- Project Executing Agency: Faserinstitut Bremen, Germany
- Supervisory Body: International Cotton Advisory Committee (ICAC)
- Project Partner: CIRAD, Montpellier, France
- Project duration: December 2007 to November 2011



- **Regional Technical Centre West/Central Africa**

- At: CERFITEX, Segou, Mali
- Partner: SOFITEX, Burkina Faso



- **Regional Technical Centre East/Southern Africa**

- At: Tanzania Bureau of Standards, Dar es Salaam, Tanzania
- Partner: Tanzania Cotton Board, Dar es Salaam, Tanzania



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Drieling, CSITC

ACA Khartoum



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Support to African Cotton Producing Countries

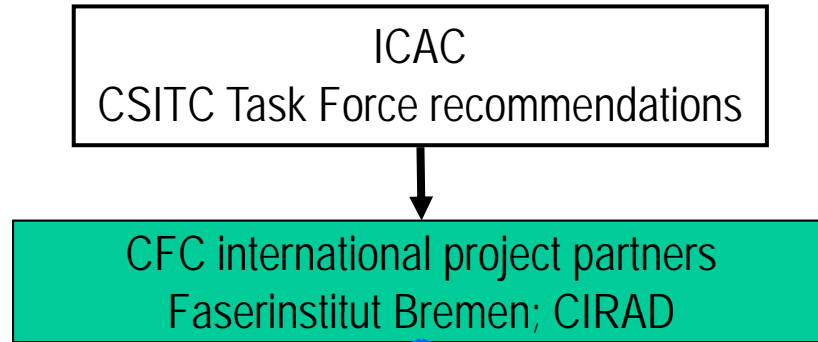


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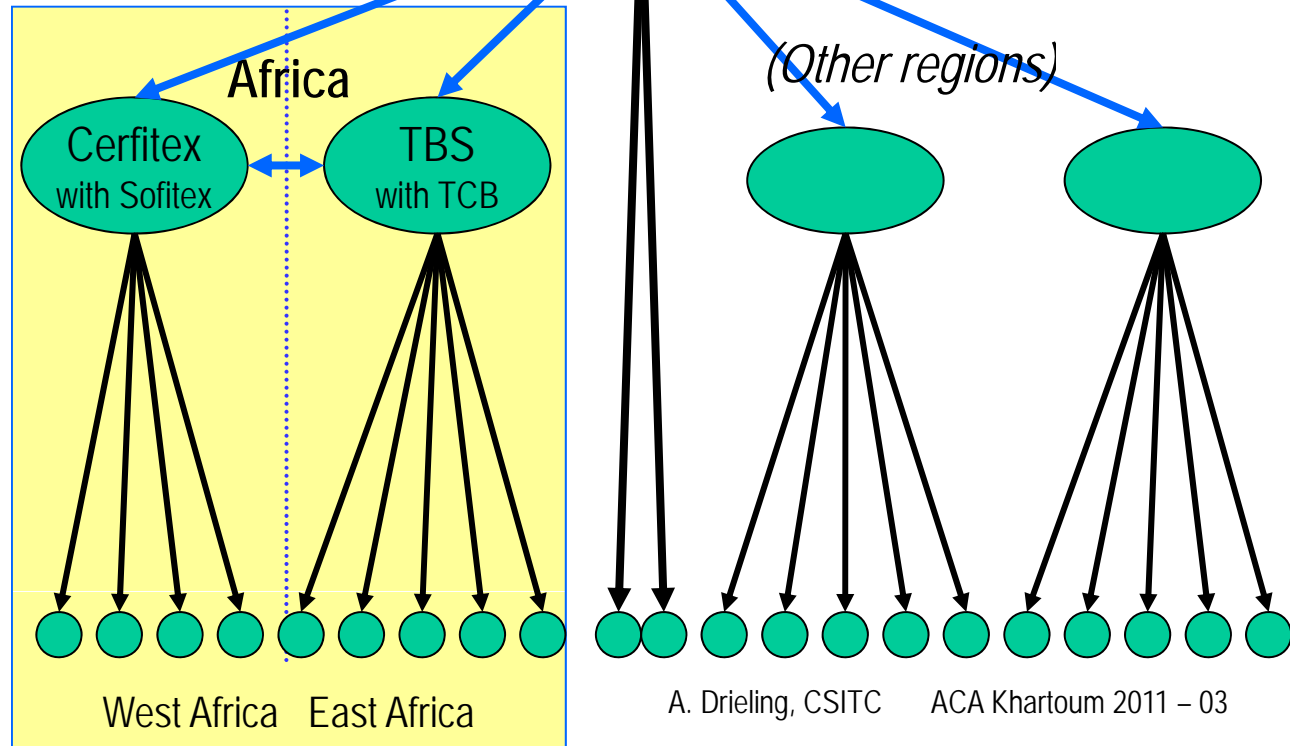
- It is not sufficient to check cotton testing laboratories in Africa, but to support labs to be able to produce reliable test results.
- The support is done mainly by the establishment of Regional Technical Centres (RTCs) in West/Central and East/Southern region.
- RTCs mainly cover the following activities:
 - Reference activities
 - Re-tests, Regional round trials
 - Provision of information
 - Training, experience and expertise, technical information, regional cooperation
 - Routine testing of the regional cotton production where it is demanded
- Additionally there is direct support for suitable existing laboratories to enhance their testing environment (surrounding, climate recorders, calibration material)

Support to African Cotton Producing Countries

International project partners



Regional centres



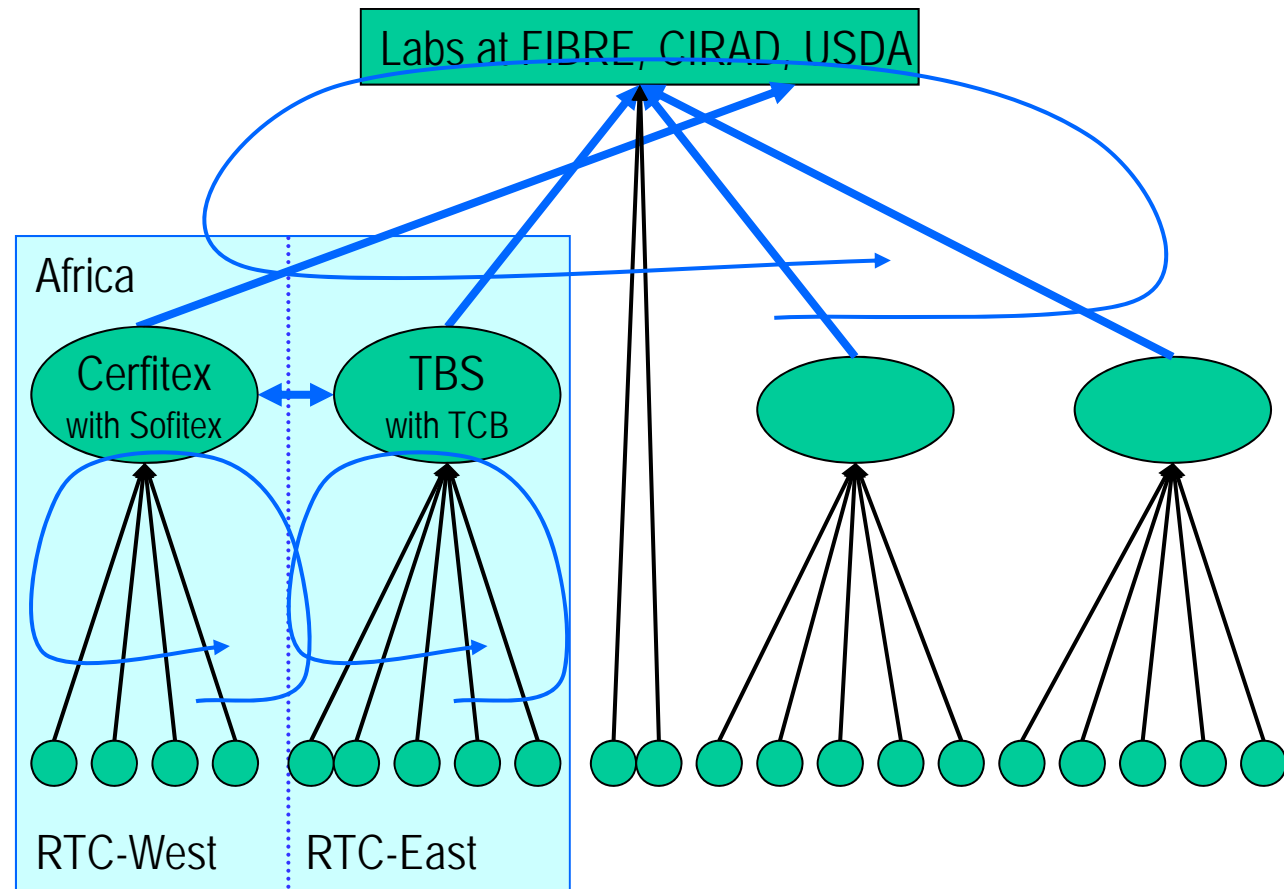
Individual Laboratories

Detail: Re-tests on tested samples

International project partners
FIBRE, CIRAD, USDA, BBB

Regional Technical Centres (RTC)

Individual Laboratories





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Comparison of Instrument Testing Performance in Africa and Worldwide

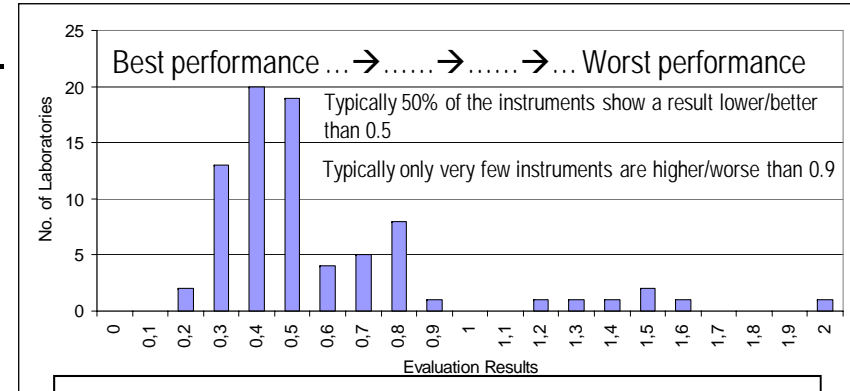
→ Intense testing for interlab. comparison

1. Evaluation of the test methods / test result variation
 - Check and improve result variation
 - Fixing of commercial trade limits

2. Checking and Rating of the participating laboratories
 - based on the trueness of the results

3. Detailed analysis of laboratory results to achieve more accurate results
 - Check laboratory results in comparison to 130 other instruments around the world
 - Find reasons for deviations

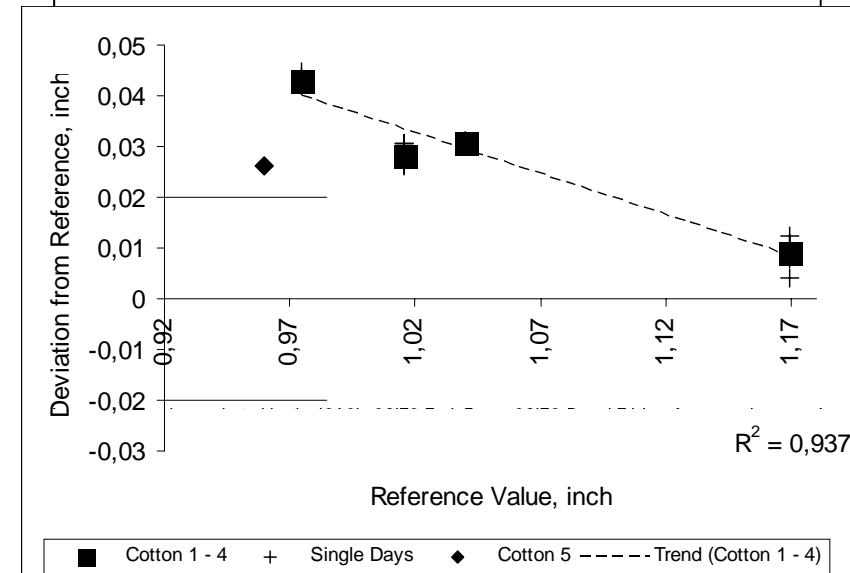
- 17- Help in achieving more accurate results



INTERNATIONAL COTTON ADVISORY COMMITTEE
 1629 K Street NW, Suite 702, Washington, DC 20006 USA
 Telephone (202) 292-1685 • Fax (202) 463-6950 • e-mail Terry@icac.org

December 2008

Summary Certificate for the Participation in CSITC Round Trials 2008





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Support to African Cotton Producing Countries



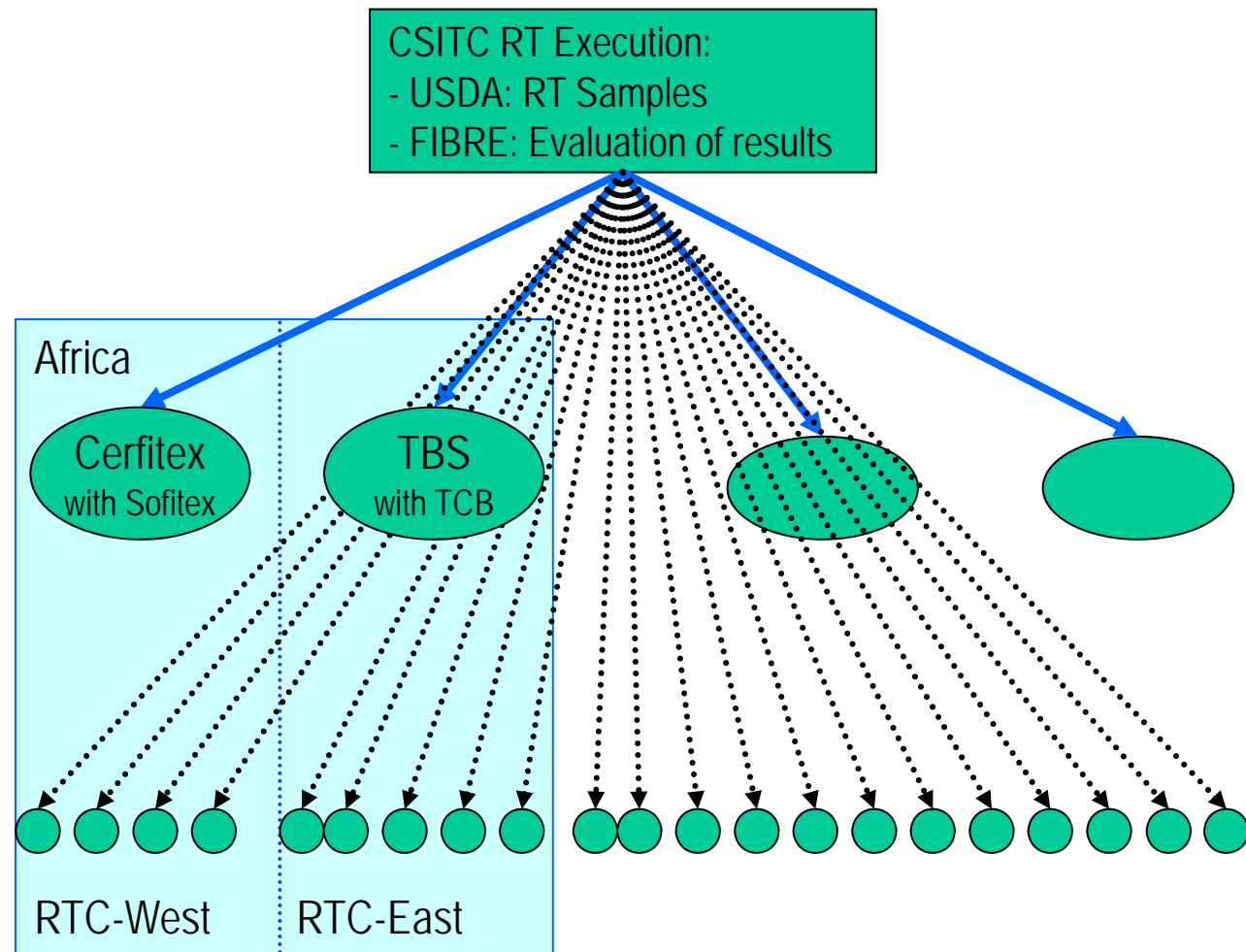
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Detail: International CSITC Round Trials

International project partners
FIBRE, USDA

Regional Technical Centres (RTC)

Individual Laboratories





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Publication of Participating Labs on icac.org and csitc.org

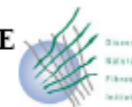


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CSITC Round Trials

- ARGENTINA**
 - Alpargatas Textil, S. A.
 - INTA-EEA Saez Peña - Laboratorio de Fibra
- AUSTRALIA**
 - Anscott Limited
 - Australian Classing Services P/L
 - Queensland Cotton Corp. Ltd.
- BANGLADESH**
 - Square Textiles Ltd.
- BRAZIL**
 - Algodoeira Petrovina
 - BM&FBOVESPA S.A.
 - Centro de Análise de Fibras EBDA/ABAPA
 - Comfi e Companhia Catarinense de Fiação
 - FBET—Fundação Birmenense de Estudos Textéis
 - Kuhlmann Labs: Acrema/ALCOTTON, Bahia ABAPA, Chapadão do Sul/AMPASUL, Rhoda Velha/ABAPA, Sapezal
 - Minas Cotton (AMIPA)
 - SGS do Brasil Ltda, Filial Rondonópolis MT
 - Unicotou—Cooperativa de Produtores de Algodão
- ➔ **BURKINA FASO**
 - SOFITEX Laboratoire de Classement Coton
- CHINA, PEOPLE'S REPUBLIC**
 - Shandong Technical Center for Inspection & Quarantine
 - Uster Technologies (Suzhou) Co. Ltd.
 - Xin jiang Esquel Textile Company Ltd.
- COLOMBIA**
 - Distribuidora de Algodon Nacional DIAGONAL
- ➔ **EGYPT**
 - Cotton Arbitration & Testing General Organization (CATGO)
- FRANCE**
 - Cind PERSYST LTC
- GERMANY**
 - Faserinstitut Bremen a.V. (FIBRE)
- GREECE**
 - INA, S.A.
 - K. B. Markou Abee
 - NAGREF-Cotton and Industrial Plants Research Institute
- INDIA**
 - Ahmedabad Textile Industry's Research Association (ATIRA)
 - Cotton Association of India: CT&R Lab Akola, CT&R Lab Aurangabad, CT&R Lab Mumbai, CT&R Lab Rajkot
 - SGS India Pvt Limited, Ahmedabad/Agri Laboratory
 - Sporting Synthetics Ltd.
 - Thiagarajar Mills (P) Ltd.
 - U. B. Cotton Pvt. Ltd.
 - Wakefield Inspection Services (India) Pvt. Ltd.: Mumbai Lab, Rajkot Lab

- IRAN**
 - General Department of Cotton & Oil Seeds of Iran
- ITALY**
 - Filartex s.p.a.
- JAPAN**
 - Japan Spinners Inspecting Foundation
- ➔ **MALI**
 - CERFITEX, RTC West/Central
- PAKISTAN**
 - Karachi Cotton Association
- POLAND**
 - Gdynia Cotton Association Laboratory
- ➔ **SOUTH AFRICA**
 - Cotton South Africa
 - Prilla 2000 (Pty) Ltd
- SPAIN**
 - Laboratorio Agroalimentario de Sevilla
- SWITZERLAND**
 - Uster Technologies AG
- ➔ **TANZANIA**
 - Tanzania Bureau of Standards, RTC East/Southern
 - Tanzania Cotton Board
 - Wakefield Inspection Services Tanzania Ltd
- ➔ **UGANDA**
 - Cotton Development Organization
- UNITED KINGDOM**
 - International Cotton Association (ICA)
- USA**
 - Cotton Incorporated Product Evaluation Laboratory
 - Fiber & Biopolymer Research Institute (Texas Tech University)
 - Monsanto HVI Lab
 - USDA, AMS Cotton Offices: S&E Cotton Program, Abilene TX, Corpus Christi TX, Dallas AR, Florence SC, Lubbock TX, Macon GA, Memphis TN, QA Branch, Visalia CA
 - USDA, ARS, Cotton Quality Research Station, Clemson SC
 - USDA ARS—SRRC, New Orleans LA
 - Uster Technologies, Inc.
- UZBEKISTAN**
 - SGS Tashkent Ltd.
 - Uzbek Centre SIFAT Regional Labs: Andijan, Bukhara, Jizzakh, Karakalpak, Karachi, Khorezm, Namangan, Navoi, Samarkand, Surkhandarya, Tashkent
 - Wakefield Inspection Services (Tashkent) Ltd
- ➔ **ZAMBIA**
 - Demevent (Zambia) Limited
- ➔ **ZIMBABWE**
 - Cotton Company of Zimbabwe



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African Participation in CSITC RTs



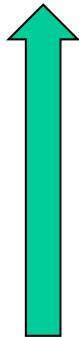
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	2007	2008	2009	2010	2011
Labs	8	11	9	12	14 registered
Instr. (paral.)	13	16	12	16	?
Countries	6	8	7	8	10 registered
Countries	Benin Egypt South Afr. Tanz. Zambia Zimbabwe	Benin Egypt Kenya South Afr. Sudan Tanz. Zambia Zimbabwe	Egypt Mali South Afr. Tanz. Uganda Zambia Zimbabwe	Burkina Faso Egypt Mali South Africa Tanz. Uganda Zambia Zimbabwe	Burkina Faso Egypt Mali Senegal South Africa Sudan Tanz. Uganda Zambia Zimbabwe

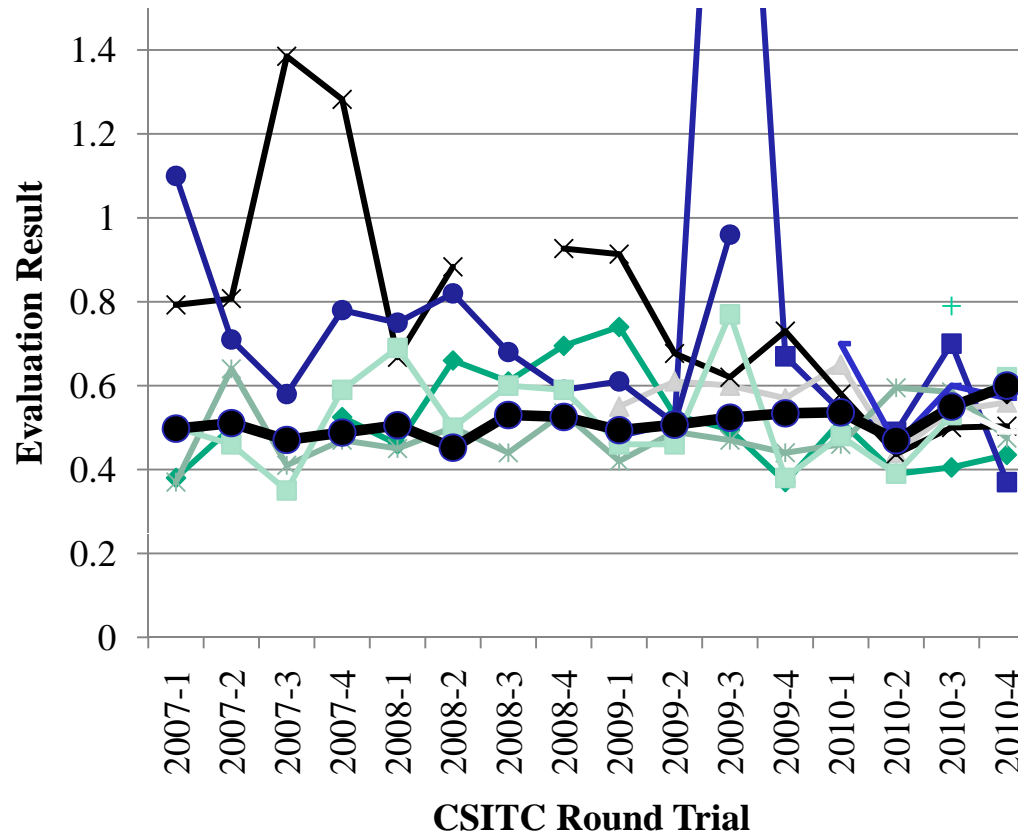
All African Laboratories in Comparison to Median of all Labs worldwide

Evaluation

Worse performance



Best performance



Only labs with Uster or Premier instruments chosen

● Median of all instr. Worldwide

There is a trend that the African labs are getting better and closer together



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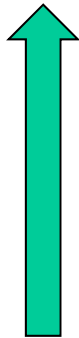
African Lab Evaluation Results in CSITC RT



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Evaluation

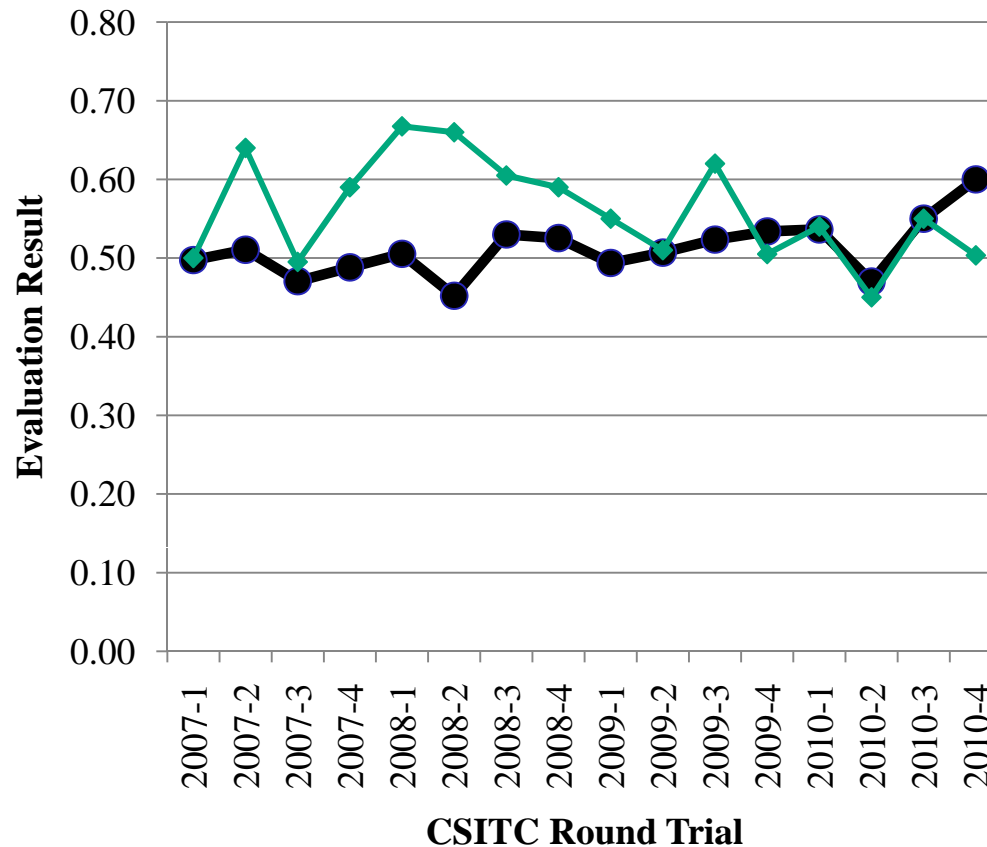
Worse performance



Best performance

Median of All African Laboratories in Comparison to Median of all Labs worldwide

Only labs with Uster or Premier instruments chosen

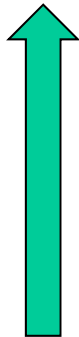


It is clearly visible that the African labs are getting better

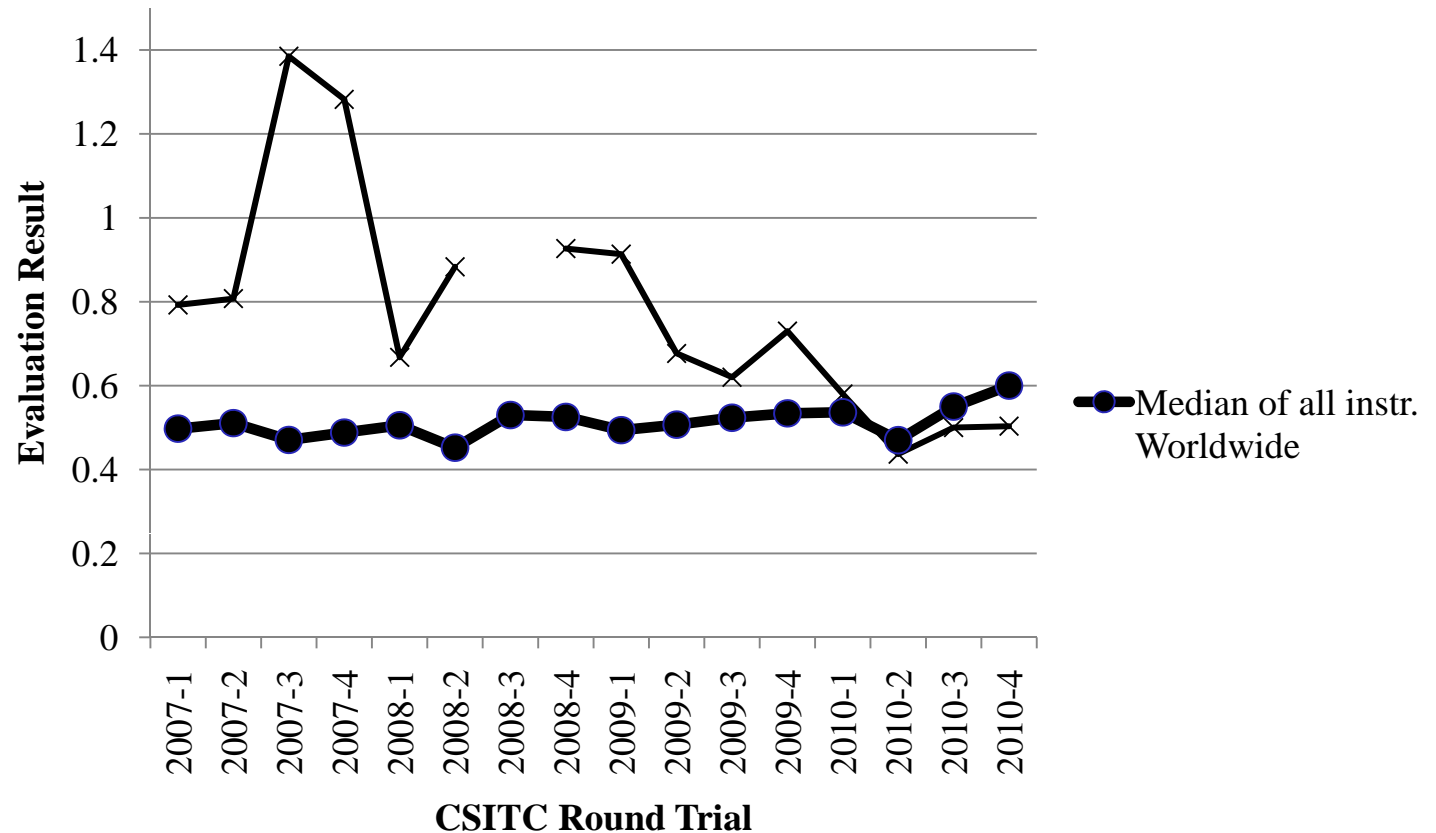
African Laboratory "A" in comparison to Median of all Labs

Evaluation

Worse performance



Best performance

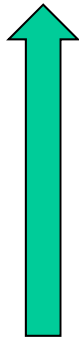


This lab improved strongly based on the CSITC support and RT evaluations

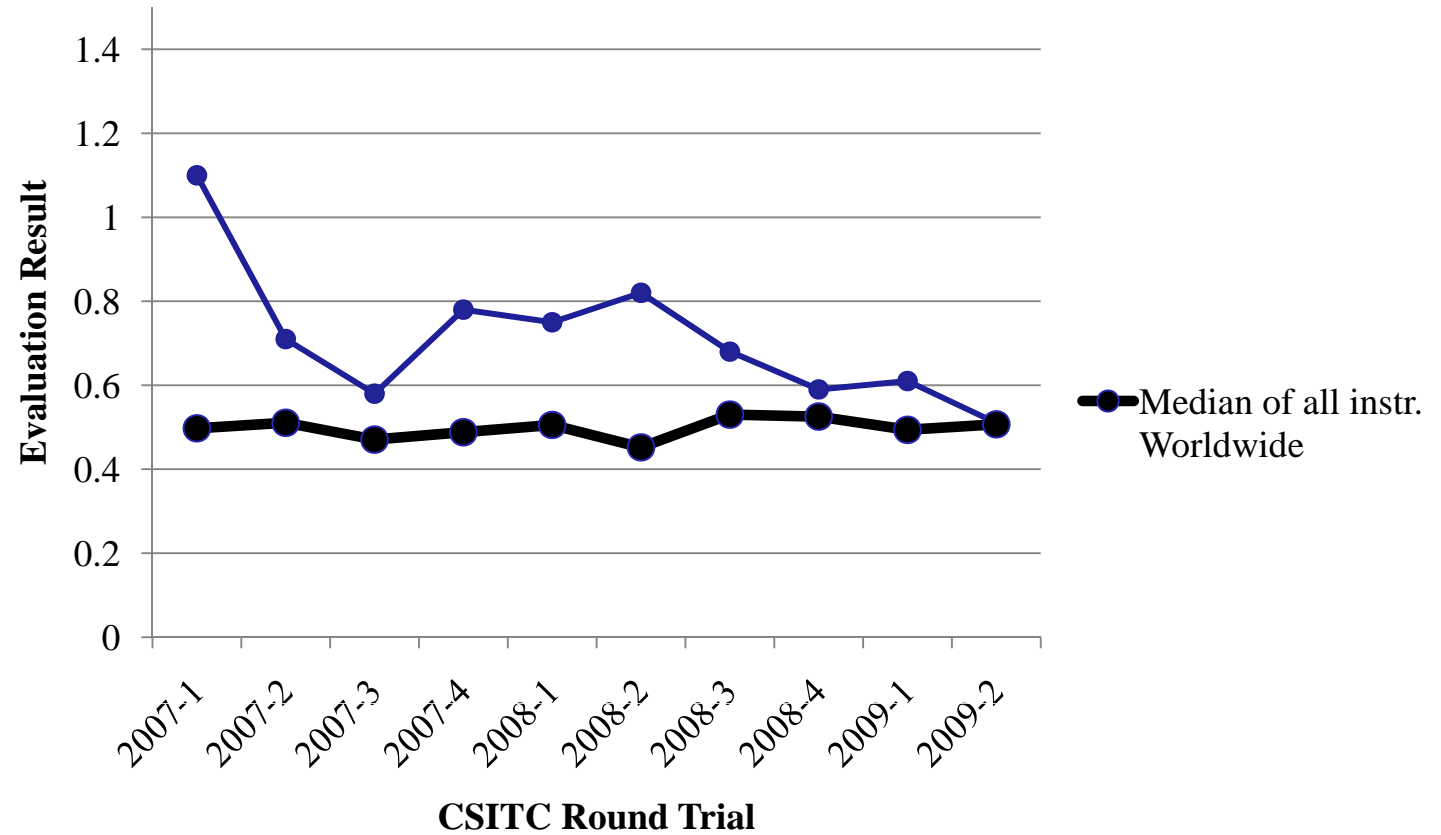
African Laboratory "B" in Comparison to Median of all Labs

Evaluation

Worse performance



Best performance

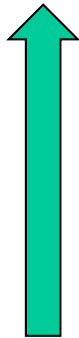


This lab improved strongly, too

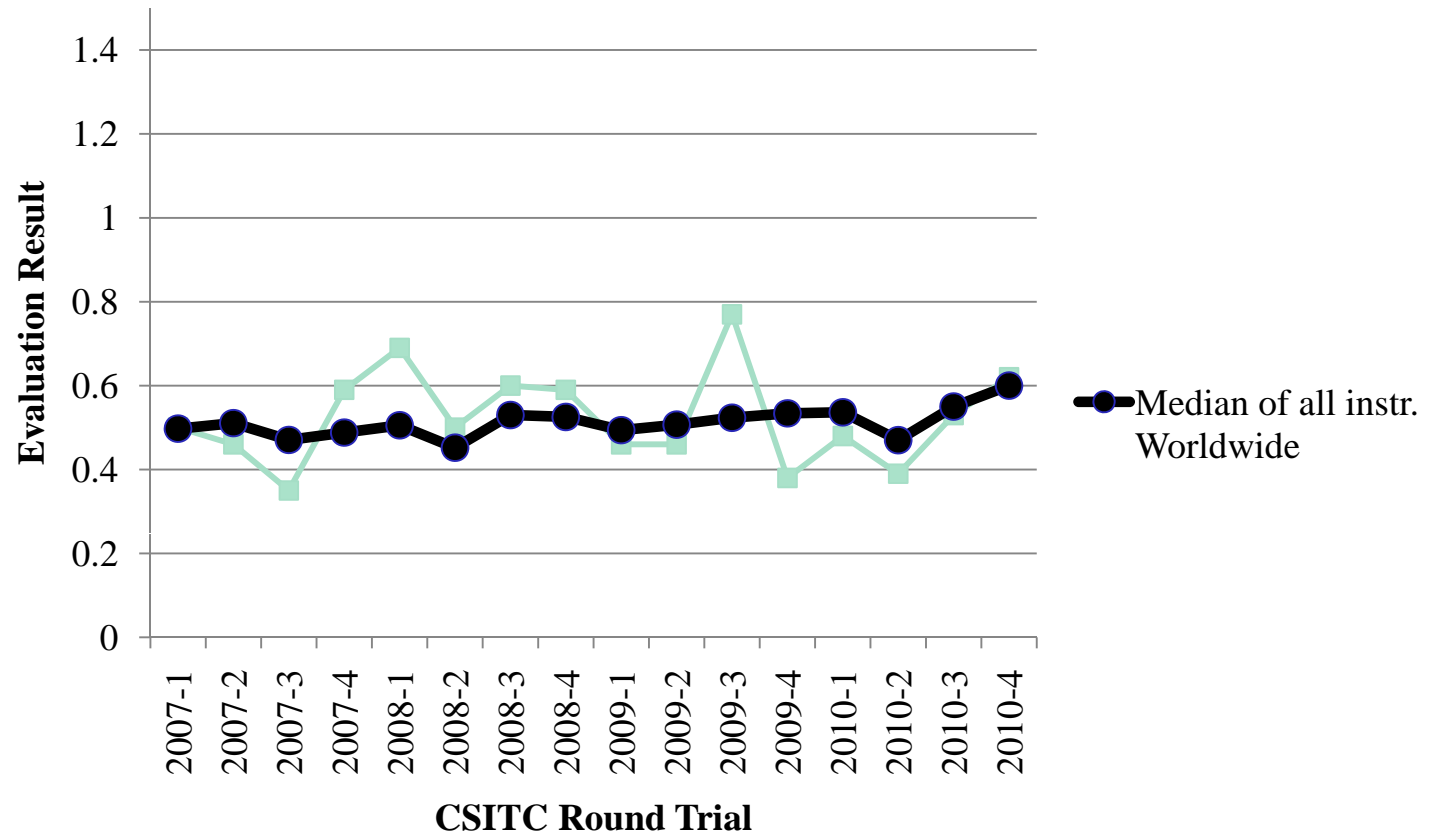
African Laboratory "C" in Comparison to Median of all Labs

Evaluation

Worse performance



Best performance

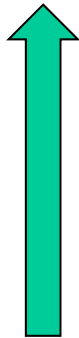


This lab proofed to be performing „on average“ all the time

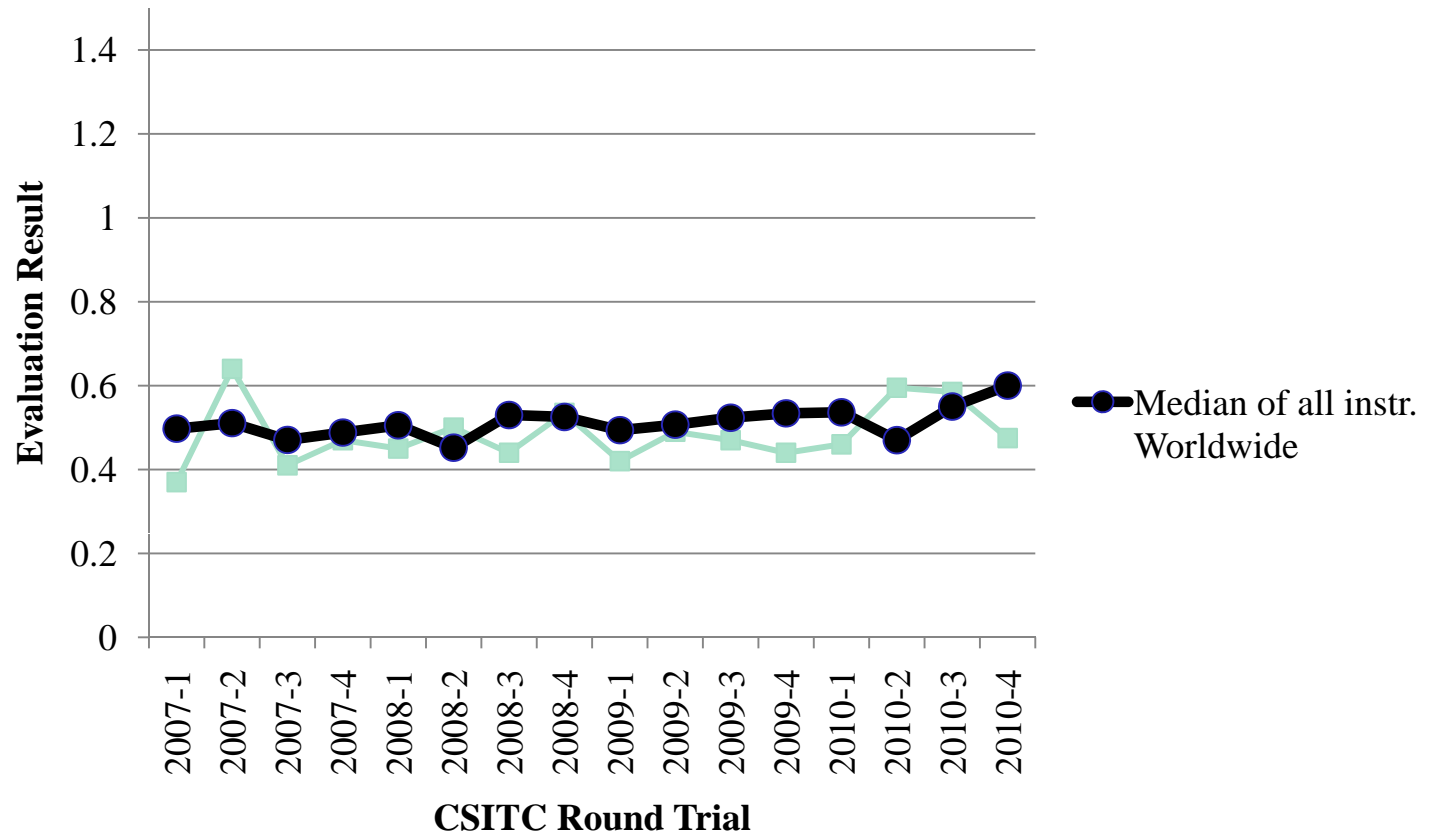
African Laboratory "D" in Comparison to Median of all Labs

Evaluation

Worse performance



Best performance



This lab proved to be performing „better than average“ - nearly all the time, Belonging to the 50% of the best labs worldwide



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Conclusion from RT Results



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- Laboratories have the chance to improve their performance
 - Based on the work of the Regional Technical Centres
 - Based on the participation and analyses in the CSITC RTs
- Laboratories should participate in the CSITC RTs as soon as possible in order to learn where and how to improve
- Laboratories get with the CSITC Round Trials an objective proof of their performance



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Current developments in Instrument Testing in Africa



CSITC Website www.csitc.org



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Commercial Standardization of Instrument Testing of Cotton



Round Trial Login

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[CSITC Round Trials](#)

[CSITC CFC/ICAC/33 Project](#)

[Technical information - Instrument testing](#)

[RTC Central Asia](#)

[RTC East Africa](#)

[RTC West Africa](#)

[Regions Without RTC](#)

[Project Partners](#)



The ICAC Task Force on CSITC was created after representatives of merchants and spinners agreed that an international agreement on the use of instrument based quality evaluation systems was needed to standardize quality test results.

[Read more.....](#)



The aim of the project, which is funded by the Common Fund for Commodities (CFC) and the European Union, aims to improve the integrity of worldwide cotton trade by establishing a reliable system of instrumental cotton characterisation, adoptable by all cotton producing countries, especially developing countries.

[Read more.....](#)

Latest News

[Request: Consultants for mid-term evaluation](#)

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[Inauguration of African Regional Technical Centres on 08 and 09 April 2010](#)

[Read more.....](#)



The ICAC Task Force on CSITC is conducting global CSITC Round Trials consisting of quarterly tests. All cotton fiber testing laboratories capable of measuring cotton samples with rapid testing instruments, often referred to as high volume instruments (HVI), and based on the Universal Calibration Cotton Standards for Micronaire, Upper-half mean length, Length uniformity index, Strength, Rd color, and +b color are encouraged to participate.

[Read more.....](#)



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***Thank you very much
for your kind attention!***