

**COTTON TESTING IN AFRICA**

**CHAPTER 4.2**

**ANNEX A: DIREKT SUPPORT TO THE  
LABORATORIES FULL TEXT**

**Project CFC/ICAC/33**

**Commercial Standardization of  
Instrument Testing of Cotton  
with particular consideration of Africa**



This project is co-funded by the European Union  
and the Common Fund for Commodities



Author: Philipp Lehne  
Organization: Faserinstitut Bremen e.V. (FIBRE), Bremen, Germany

## **Executive Summary**

### **Introduction**

Despite that many laboratories of national cotton classing organizations have high volume cotton testing instruments many are not performing well, reasons being old equipment, e.g. for laboratory climate management and difficult access to resources as maintenance service or calibration cotton standards. To increase its possible overall impact one of the activities of the project CFC/ICAC/33 was to provide direct support to national cotton classing organizations to install proper conditions of working, such as for the climate control of the laboratories in order to improve their performance. For this as step one is the status quo was analysed and the necessary monetary support estimated. As second step the necessary support to improve the laboratory conditions for reliable testing was delivered.

Support criteria which cotton testing organizations need to fulfill to qualify for material support were agreed between the project supervisory body, the project funding body, and the project executing agency. Agreed support preconditions were the membership of the country to the ICAC and the CFC. The organization itself had to be the national responsible cotton classing organization, needed to have a high volume testing instrument, had established relationships with the Regional Technical Centre (through signed Memorandum), had a significant production of upland cotton lint with significant export share. Further the project limited its regular support to a maximum of USD 25,000 for each organization and did not contribute more than half of the overall improvement costs. Agreement on support was an iterative process for each organization which could only be successfully finished with a high level of motivation from the organization itself to ensure buy-in and effective use of project resources.

In the East/Southern African region organizations from 16 countries were assessed on their conformity with the support criteria. In the West/Central African region organizations from 14 countries were assessed on their conformity with the support criteria. An additional desk research was performed to evaluate the information already available and to further structure the material support program.

Questionnaires were sent to 10 potentially qualifying organizations in East/Southern African region to further evaluate conformity with support criteria and identify needs for laboratory improvement. Questionnaires were sent to 10 potentially qualifying organizations in West/Central African region to further evaluate conformity with support criteria and identify needs for laboratory improvement.

From the desk research it was assessed that likely none of the organizations had qualified independent laboratory climate measuring and recording instruments (climate recorders) and that many laboratories were using wrong, outdated, or overused calibration cotton standards. The material support program was thus further structured into a general support component and an individual support component. In the general component modern climate recorders and calibration cotton standards were supplied to qualifying organizations. The individual support component was used to support the qualifying organizations to improve their cotton testing laboratories according to the actual deficits as reported in the questionnaires. Additionally a cotton laboratory technical expert was identified to further assess such laboratories for which the possible support needed to be further detailed on the basis of technical conditions and local procurement options.

In the East/Southern African region questionnaires were returned by 8 cotton testing organizations. Based on the reported information seven cotton testing organizations from seven countries were taken up in both the general and the individual component of the material support program. Two further organizations were supported from the general component only. Supported countries are Egypt, Kenya, Mozambique, South Africa, Sudan, Tanzania, Uganda, Zimbabwe. From the general component in total 11 sets of climate recorders and 14 sets of calibration cotton standards were delivered. Support from the individual component could be given to organizations in Kenya, Mozambique, Sudan, Tanzania, Uganda, and Zimbabwe for Air Management System procurement/repair and for Testing Instrument maintenance. The total financial support for purchase and transport of goods was EUR 137,000.

In the West/Central African region questionnaires were returned by 9 cotton testing organizations. Based on the reported information six cotton testing organizations from six countries were taken up in both the general and the individual component of the material support program. Supported countries are Benin, Burkina Faso, Mali, Nigeria, Senegal, Togo. From the general component in total 6 sets of climate recorders and 4 sets of calibration cotton standards were delivered. Support from the individual component could finally be given to organizations in Burkina Faso, Senegal, and Togo for Air Management System procurement and for Testing Instrument maintenance. Additionally a cotton laboratory technical expert did further assessment for laboratories in Mali, Nigeria, and Togo. An Air Management System technical expert assessed an Air Management System in Senegal. The total financial support for purchase and transport of goods was EUR 63,000.

### **Ending / Conclusion**

Thanks to the initiatives of the national responsible cotton classing organizations and with the support from the project CFC/ICAC/33 many Sub-Saharan African countries | East/Southern African countries | West/Central African countries improved the ability on cotton instrument classing substantially in recent years. As a result it is expected that 8 out of the 11 East/Southern African countries with an annual cotton lint production larger than about 10,000 metric tons already have or will have within 2012 operational national cotton testing laboratories on an acceptable to excellent level of technical qualification (coming from 5 before the project most of which would have gone out of operation in the meantime). As a result it is expected that 5 out of the 10 West/Central African countries with an annual cotton lint production larger than about 10,000 metric tons already have or will have within 2012 operational national cotton testing laboratories on an acceptable to excellent level of technical qualification (coming from 3 before the project).

### **Aims**

C.2.2. Estimation of the necessary material support

To prepare the cotton testing laboratories in the regions to fulfill the quality requirements of reliable cotton testing, support with the required equipment is regarded (not including SITC instruments). This support will help to involve Africa faster to the CSITC level. Step one is the analysis of the status quo and the necessary monetary support.

C.2.3. Direct material support for the laboratories

Step 2 is the donation of the necessary support to improve the laboratory conditions for reliable testing.

### **Materials/Methods**

Support criteria which cotton testing organizations need to fulfill to qualify for material support were agreed between the project supervisory body, the project funding body, and the project executing agency. Agreed support preconditions were the membership of the country to the ICAC and the CFC. The organization itself, had to be the national responsible cotton classing organization, needed to have a high volume testing instrument, had established

relationships with the Regional Technical Centre (through signed Memorandum), had a significant production of upland cotton lint with significant export share. Further the project limited its regular support to a maximum of USD 25,000 for each organization and did not contribute more than half of the overall improvement costs. Agreement on support was an iterative process for each organization which could only be successfully finished with a high level of motivation from the organization itself to ensure buy-in and effective use of project resources.

In the East/Southern African region organizations from 16 countries were assessed on their conformity with the support criteria. In the West/Central African region organizations from 14 countries were assessed on their conformity with the support criteria. An additional desk research was performed to evaluate the information already available and to further structure the material support program.

Questionnaires were sent to 10 potentially qualifying organizations in East/Southern African region to further evaluate conformity with support criteria and identify needs for laboratory improvement. Questionnaires were sent to 10 potentially qualifying organizations in West/Central African region to further evaluate conformity with support criteria and identify needs for laboratory improvement.

## **Results**

From the desk research it was assessed that likely none of the organizations had qualified independent laboratory climate measuring and recording instruments (climate recorders) and that many laboratories were using wrong, outdated, or overused calibration cotton standards. The material support program was thus further structured into a general support component and an individual support component. In the general component modern climate recorders and calibration cotton standards were supplied to qualifying organizations. The individual support component was used to support the qualifying organizations to improve their cotton testing laboratories according to the actual deficits as reported in the questionnaires. Additionally a cotton laboratory technical expert was identified to further assess such laboratories for which the possible support needed to be further detailed on the basis of technical conditions and local procurement options.

In the East/Southern African region questionnaires were returned by 8 cotton testing organizations. Based on the reported information seven cotton testing organizations from seven countries were taken up in both the general and the individual component of the material support program. Two further organizations were supported from the general component only. Supported countries are Egypt, Kenya, Mozambique, South Africa, Sudan, Tanzania, Uganda, and Zimbabwe. From the general component in total 11 sets of climate recorders and 14 sets of calibration cotton standards were delivered. Support from the individual component could be given to organizations in Kenya, Mozambique, Sudan, Tanzania, Uganda, and Zimbabwe for Air Management System procurement/repair and for Testing Instrument maintenance. The total financial support for purchase and transport of goods was EUR 137,000.

In the West/Central African region questionnaires were returned by 9 cotton testing organizations. Based on the reported information six cotton testing organizations from six countries were taken up in both the general and the individual component of the material support program. Supported countries are Benin, Burkina Faso, Mali, Nigeria, Senegal, Togo. From the general component in total 6 sets of climate recorders and 4 sets of calibration cotton standards were delivered. Support from the individual component could finally be given to organizations in Burkina Faso, Senegal, and Togo for Air Management System procurement and for Testing Instrument maintenance. Additionally a cotton laboratory technical expert did further assessment for laboratories in Mali, Nigeria, and Togo. An Air

Management System technical expert assessed an Air Management System in Senegal. The total financial support for purchase and transport of goods was EUR 63,000.

### Discussion / Conclusions

Thanks to the initiatives of the national responsible cotton classing organizations and with the support from the project CFC/ICAC/33 many Sub-Saharan African countries | East/Southern African countries | West/Central African countries improved the ability on cotton instrument classing substantially in recent years. As a result it is expected that 8 out of the 11 East/Southern African countries with an annual cotton lint production larger than about 10,000 metric tons already have or will have within 2012 operational national cotton testing laboratories on an acceptable to excellent level of technical qualification (coming from 5 before the project most of which would have gone out of operation in the meantime). As a result it is expected that 5 out of the 10 West/Central African countries with an annual cotton lint production larger than about 10,000 metric tons already have or will have within 2012 operational national cotton testing laboratories on an acceptable to excellent level of technical qualification (coming from 3 before the project).

### Comparison of targets and fulfillment

The targets were reached in general. Although it was not possible to support every national responsible cotton classing organization the effective use of available funds was assured and the project did not support laboratories that did not fulfill the support criteria or needed so much improvement that the possibilities of the project would have been exceeded.

Table 4..3.1 Development of instrument testing in East/Southern Africa

Country	Average Production	resp. Organisation	addit. Organisations with SITC*	Resp. Org: laboratory installed	laboratory operational	Development during CFC/ICAC/33 implementation (2007-2011)	Improvements supported by for	Perspective / Comments
Egypt	142	CATGO	research processing	yes	yes	routine operation	-	routine operation
Zimbabwe	103	Agr. Market. Authority (COTTCO)	production	yes	yes	routine operation	CFC/ICAC/33	routine operation 100% instr. classing
Tanzania	100	TCB	control RTC	yes	(yes)	TCB: Lab climatization improvement, new 2nd lab	CFC/ICAC/33	10% testing, improving, extending
Zambia	48	Cotton Board of Zambia	production	no	-		-	Board erected
Sudan	32	SCCL	research	yes	no	Lab climatization restoration (research lab testing for SCCL)	CFC/ICAC/33	
Ethiopia	25	none	governmental	no	-		-	discussions, no fixed strategy
Mozambique	25	IAM	research	no	-	Implementation of 3 SITC laboratories (operational End 2011)	CFC/ICAC/33	Implementing 100% instr. classing
Malawi	22	Ministry of Agriculture	no	no	-		-	
Uganda	22	CDO	no	yes	(yes)	New SITC, Lab climatization improved (operational End 2011)	CFC/ICAC/33	improving lab
Kenya	9	CODA	no	no	-	Governmental call for tender for lab climatization (2011)	CFC/ICAC/33	Preparing for instrument classing
South Africa	9	Cotton SA	control processing	yes	yes	routine operation	-	routine operation
Madagascar	< 7							
Burundi	2	COGERCO						
Rwanda	2							
Mauritius	0		governmental processing					
Swaziland	< 1	Swaziland Cotton Board						
Lesotho	< 1		processing					

Table 4. **Error! No text of specified style in document.** 3.2 Development of instrument testing in West/Central Africa

Country	Average Production	resp. Organisation	addit. organisations with SITC*	Resp. Org: laboratories	laboratory operational	Development during CFC/ICAC/33 implementation	Improvements supported by (or offered by)	Perspective / Comments
Burkina Faso	180	SOFITEX	no	yes	(yes)	New SITC, Lab climatisation improved (operational Autumn '11)	CFC/ICAC/33	Implementing instr. classing
Mali	102	CMDT - OCC	education RTC	yes	(yes)	Minor improvements. Regional RT participation.	(CFC/ICAC/33)	
Benin	97	AIC (SCQCC)	no	yes	yes	Organisational restructuring completed.	(CFC/ICAC/33)	
Côte d'Ivoire	71	APROCOT-CI CIDT	research	no	-	SITC procured. Lab improvement planned and pending.	UNIDO	Establishing instrument testing
Nigeria	63		research			Participation in RTC trainings		
Cameroon	57	SODECOTON	processing	no	-		-	Planning instrument testing
Chad	24	Coton Tchad	no	yes	no	Participation in RTC trainings	-	
Togo	15	NSCT	no	yes	no		(CFC/ICAC/33)	
Senegal	11	SODEFITEX	no	yes	yes	Lab climatisation improved (2009). SITC maintenance (2011)	CFC/ICAC/33	+
Ghana	9	(GCCL)	research	no	-		-	
Centr. Afric. Rep.	4	SOCADETEX (?)						
Guinea (Rep.)	4	CGC (?)						
Congo, DR	3							
Niger	2							