Rapport de mission en Turquie (Izmir)

- **Pour la 66ième réunion plénière du Comité Consultatif International du Coton (CCIC ou ICAC)**
- **pour le groupe de travail « *Commercial Standardization of Instrument Testing of Cotton* » (CSITC)**

Du 20 au 28 octobre 2007

Michel CRETENET
Jean-Paul GOURLOT
CIRAD

1 - Objectif

- Participation à la réunion du groupe de travail CSITC « *Commercial Standardization of Instrument Testing of Cotton* »
- Participation au 66° comité plénier de l'ICAC
- Préparation de la mise en place effective du projet CFC/ICAC/33.

2 - Personnes rencontrées

Membres du CSITC

Représentants officiels des pays membres de l'ICAC

Personnes dont les cartes de visite figurent en annexe 6

3 - Calendrier

20/10 : Montpellier – Paris CDG – Munich – Izmir

21 /10 : réunion préparatoire du CSITC

21/10 : réunion officielle du CSITC

22-26/10 : participation au 66° comité plénier de l'ICAC

27/10 : Izmir Munich Paris CDG (grèves)

28/10 : Paris CDG Domicile

4 - La 66°réunion plénière de l'ICAC

Le thème de cette 66ème réunion annuelle de l'ICAC était "Strategies for National Competitiveness". Le programm de la réunion est donné en annexe 1. Quarante-quatre pays sont représentés, le nombre de participants est de l'ordre de 500 à 600 personnes. Le programme et la plupart des documents sont en ligne sur le site de l'ICAC à l'adresse suivante :

http://www.icac.org/meetings/plenary/66_izmir/documents/english/english.html

Le CIRAD siège en tant qu'organisation internationale dans ces réunions internationale. Il est invité à prononcer une déclaration au cours de la seconde session plénière (annexe 2). Cette déclaration est annexée à ce compte rendu.

Par ailleurs, il nous a été demandé de faire une présentation sur le thème "*Crop management in 2025*" dans le cadre de la 5ème session plénière "*The vision for technology in 2025*". La communication est annexée à ce compte rendu en annexe 3 et le diaporama en annexe 4.

Ce type de réunion est l'occasion de contacts avec le "monde du coton", les cartes de visites de certaines personnes rencontrées (cf. annexe 7), illustrent la diversité des participants.

La prochaine réunion plénière de l'ICAC aura lieu du 17 au 22 Novembre à Ouagadougou avec trois thèmes majeurs pour le séminaire technique :

- les nouveaux développements de la lutte intégrée contre les ravageurs,
- les causes de la baisse des rendements en Afrique sub-saharienne,
- et l'amélioration de la durabilité des systèmes de culture cotonniers.

Il conviendra pour le CIRAD de se préparer à cet évènement majeur pour les recherches cotonnières en Afrique.

5 - Réunion du CSITC « Commercial Standardization of Instrument Testing of Cotton » (JPG)

Le CSITC a tenu une réunion pour décider des nouvelles orientations et propositions de recommandations à émettre à l'avenir.

Le bilan des trois premiers tests inter-laboratoires du CSITC a été réalisé et a montré une participation moyenne de 70 laboratoires. Les notes moyennes et médianes restent stables avec le temps, et des efforts d'information/formation doivent être mis en place pour améliorer la situation. La signature du projet CFC/ICAC/33 arrive à point pour permettre la mise en place de solutions d'appui aux laboratoires.

L'autre sujet de la journée concernait le thème de l'arbitrage et la conciliation. Un compte-rendu officiel sera mis par le secrétariat de l'ICAC prochainement.

6 - Projet CFC/ICAC/33 « Standardisation commerciale de la mesure instrumentale du coton pour les pays producteurs africains »[1] (JPG)

Ce projet est co-financé par

- le CFC (*Common Fund for Commodities*) à hauteur de 2 millions d'USD ;
- l'Union Européenne à hauteur de 3 millions d'USD, cet argent transitant par le CFC
- les partenaires qui apportent environ 3 millions d'USD de contrepartie financière.

Pour rendre ce projet possible, plusieurs contrats sont nécessaires :

- un contrat bipartite entre EU et CFC
- un contrat bipartite entre CFC et l'agence d'exécution (Faserinstitut de Brême, FIBRE)
- un contrat entre FIBRE et chacun des partenaires à savoir un contrat tripartite FIBRE CERFITEX – SOFITEX en Afrique de l'Ouest, un contrat tripartite FIBRE TBS TCB en Afrique de l'Est, un contrat bipartite FIBRE CIRAD, deux contrats bipartites CERFITEX SOFITEX et TBS TCB.

Au cours de la mission, nous avons reçu la confirmation que les deux premiers niveaux de contrats étaient signés, et que l'on pouvait procéder à la signature des contrats entre FIBRE et les partenaires.

Une rencontre avec FIBRE, CIRAD, TBS, TCB, SOFITEX (pas de représentant de CERFITEX) a été organisée pour expliquer les avancées et discuter de la suite des activités.

En premier lieu, chacun des partenaires doit signer les contrats en semaines 44 ou 45.

Ensuite, le travail commence par la fourniture de toutes les informations nécessaires (liste des laboratoires, liste des personnels…).

Le calendrier et le contenu des formations a été discuté mais doit être finalisé. Pour ce qui concerne l'implication du Cirad, la formation des 4 futurs experts africains du projet et des centres techniques régionaux (CTR) créés par le projet aurait lien en janvier ou février 2008.

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[1] Afin de permettre un partage des objectifs de ce projet avec les collègues et avec leurs partenaires, j'ai attaché le texte (annexe 4) et les diapositives de la présentation (annexe 5) faite au mois de janvier 2007 lors de la conférence de *Beltwide Cotton Conferences*. En cas de question, merci de me les faire suivre.

Il est prévu de contacter les CTR pour obtenir une liste d'universités afin de recruter un étudiant par région afin de réaliser les activités de la composante D (étude de variabilité intra-balle des caractéristiques mesurées, création d'instruments et de méthodologies).

7 - Autres informations collectées

7.1 - Idée de Rafiq Chaudry

Rafiq veut monter en Afrique un système de classement comparable à celui existant aux Etats-Unis d'Amérique. Toutes les composantes doivent être prises en compte, qu'elles soient organisationnelles, financières, sociales ...

La question est de savoir où et quand créer ce projet. J'ai rappelé qu'il faut au moins une articulation avec le projet CFC/ICAC/33. J'ai proposé plusieurs pays : Ouganda (Mme Jolly Sabune), le Cameroun, le Sénégal (ISO 9000), le Burkina Faso (ISO 9000 à la SOFITEX). Reste à affiner les choix, enjeux, objectifs et à en reparler avec Rafiq.

7.2 - Idée de projet.

La question de la baisse des rendements en Afrique a été abordée par la plupart des délégations africaines. Cette baisse des rendements est généralement imputée à une moindre utilisation des engrais minéraux du fait que leur coût - relatif à celui du coton graine – est en forte augmentation. Par ailleurs, le taux de carbone du sol reflète bien la fertilité du sol et il est de ce fait fortement corrélé aux rendements obtenus ainsi qu'aux quantités de biomasses produites par les différentes cultures en rotation (sorgho, mils, maïs) dont une part plus ou moins importante est restituée au sol entretenant ainsi le statut organique du sol. L'idée est de faire financer une subvention aux engrais minéraux permettant l'accroissement du taux de carbone dans les sols (# 15 T/ha de C) des zones cotonnières africaines par la séquestration de carbone dans les sols. Une évaluation grossière situe l'équivalence entre carbone séquestré et engrais apporté à 100 kg/ha de carbone séquestrés par kg d'engrais apporté. Ce type de projet devrait pouvoir être porté par l'ACA ou l'UEMOA.

7.3 - Appel d'offre Office du Classement du Coton, MALI

Nous avons répondu avec SOFRECO à un appel d'offre en juin 2007 concernant la mise en place d'un Office de Classement du Coton au Mali come suite « logique » de la privatisation / démantèlement de la Compagnie Malienne des Textiles (CMDT).

Notre proposition n'a pas été retenue sans que l'on puisse en connaitre les raisons. Pendant cette mission, nous avons eu l'occasion de discuter avec Gérald Estur, consultant, dont la proposition d'action a été retenue à sa grande surprise. N'ayant pas toute la connaissance des éléments techniques d'une telle création, il est probable que M. Estur se tourne vers le Cirad pour sous-traiter une partie des activités qu'ils auraient définies, si nous en sommes d'accord évidemment.

7.4 - Discussion avec Allan William

Allan William coordinateur de la "Better Cotton Initiative" devrait nous rendre visite courant de la première semaine de décembre 2007, pour discuter d'un Programme de l'Environnement des Nations Unies en Afrique de l'Ouest.

7.5 - International Forum for Cotton Promotion

J.P.G a contacté plusieurs personnes pour étudier la faisabilité de soutenir le programme de l'ICAC pour soutenir / développer la consommation de coton.

Si l'Europe et la France veulent aider l'Afrique, un des moyens est effectivement de soutenir la

demande intérieure de coton (quelle qu'en soit l'origine) ; la demande augmentant, les cours du coton pourraient augmenter et favoriser au final le revenu aux planteurs en Afrique.

Des programmes de promotion ont été préparés par les membres de l'IFCP et ont montrés leur efficacité. Les budgets correspondants à ces actions sont variés (de 0 à x euros).

Il est évident que le Cirad n'est pas forcément un bon partenaire, surtout avec la stratégie de « la science au centre » retenue dernièrement. Cependant, l'information peut intéresser les Ministères ou Services impliqués.

La représentante de la France (Mme Anne SERRA), celle de la bourse de Brême (Mme Ecke), celle de la correspondante d'IDEAS à l'OMC (Mme Anne-Sophie NIVET) et le Président de la bourse de Brême ont été approchés pour information et d'éventuelles suites.

8 - Préparation du travail pour le compte des groupes de travail de l'ITMF

En mars 2006, le fonctionnement des groupes de travail de l'*International Textile Manufacturers Federation* (ITMF) a été amendé suite au désistement des équipes américaines (ITC, *Cotton Incorporated*), tant au niveau des coordinateurs qu'en tant que participant à ces groupes de travail. En conséquence, des « élections » ont permis de confirmer l'existence de certains groupes de travail (HVI, collage, poussière et trash, maturité), d'en créer de nouveau (couleur) ou d'en supprimer (longueur). Des « élections » ont permis de nommer des coordinateurs de ces groupes de travail.

Suite à mon « élection » comme coordinateur du groupe collage, j'avais posé un certain nombre de conditions pour accepter cette responsabilité. Une partie d'entre elles ont été discutées lors de la réunion préparatoire organisée le 26/02 à laquelle je n'avais pas assisté.

Les tâches des coordinateurs ont été discutées et leur mise en pratique a commencé.

Pour ce qui concerne le collage, un test inter-laboratoires est prévu sur la base des échantillons préparés par R. Frydrych en 2001 en collaboration avec *Cotton Incorporated*.

Plusieurs personnalités ont été approchées pour obtenir leur consentement à participer à ce test collage.

Parallèlement, plusieurs personnes ont été approchées afin de préparer l'agenda de la prochaine réunion des groupes de travail de l'ITMF, réunions qui auront lieu dans la première semaine d'avril 2008 à Brême.

Annexe 1

Programme de la conférence 66ième réunion plénière du Comité Consultatif International du Coton

o Patricia O'Leary, Cotton Incorporated, New Technologies in 2025

9:00 Meeting of the Steering Committee of the IYNF

10:30 Tea/coffee

11:00 Fifth Open Session (Technical Seminar) continued:

o Michel Cretenet, CIRAD-CA, Crop Management in 2025
o Axel Drieling, Bremen Fiber Institute, Fiber Quality Measurements in 2025
o Dean Ethridge, International Textile Center, Summary of WCRC-4
o Topic for the 2008 Technical Seminar
o Discussion

11:00 Breakout Session: The Effect of Global Warming on Cotton Production

o Cesar Izaurralde, Global Climate Change Institute at the University of Maryland
o Jens Soth, Helvetas Organic Cotton Center, The Role of Sustainable Cotton Production Systems in Mitigating Global Warming
o Riza Kanber, University of Çukurova

12:30 Lunch for all participants
Lunch meeting of participants in the International Training Workshop on Cotton Quality and Standards, Secretary General's Conference Room (by invitation)

13:45 Meeting of the Drafting Group (member country delegates)

13:45 Breakout Session: Traceability in Cotton Production and Consumption, Special Regional Efforts to Protect Quality Brands and Logos
Chair: Guillaume Pagy, Member of the Aegean Textile & Raw Materials Exporters' Association

o Baris Kocagöz, Izmir Cotton Exchange
o Karim Shafei, Gherzi

15:30 Tea/coffee

16:00 Meeting of the Steering Committee (member country delegates)
Chair: Elena Cores, Chair of the Standing Committee

o Election of Standing Committee Officers
o Approval of the Report of the Committee on Cotton Production Research
o Approval of the Statement of the 66th Plenary Meeting
o Other Business

16:00 Breakout Session: Price Risk Management in Cotton
Chair: Jak Eskinazi, Chairman of the Aegean Ready Wear and Clothing Exporters' Association

o Ilhan Küçükahmetler, Denizbank
o Hamdi Bagci, Turdex (Turkish Derivatives Exchange)
o Louis Goreux, The Price Smoothing Plan in Burkina Faso

17:30 Adjourn

19:30 Gala Dinner at the Izmir Cultural Park hosted by the Organizing Committee of the 66th Plenary Meeting

Friday, October 26, 2007

9:00 Sixth Open Session: Biotech Cotton: Situation and Solutions
Chair: Georges Yaméogo, Director, Developpement de la Production Cotonnière

o Aydin Kesen, Izmir Cotton Exchange
o Rob Tripp, Overseas Development Institute, Biotech Cotton and Resource-Poor Farmers
o Willem Olthof, EC Policies Regarding Biotech Cotton
o P.D. Patodia, Prime Textiles Ltd. Situation of Biotech Cotton in India

10:30 Tea/coffee

11:00 Closing Plenary Session
Chair: Ülker Güzel, Deputy Undersecretary for Foreign Trade

o Invitation from Burkina Faso to the 67th Plenary Meeting
o Closing comments by the Chair on behalf of Turkey
o Closing comments by Brazil
o Closing comments by other countries

12:00 Lunch for all participants

Strategies for National Competitiveness

66th PLENARY MEETING

ICAC

IZMIR
TURKEY

October 22-26, 2007

MINI PROGRAM

Saturday, October 20, 2007

16:00 Meeting of the Private Sector Advisory Panel (PSAP)
Sec. General's Conference Room (by invitation)

Sunday, October 21, 2007

8:00 Set up of Trade Booths

10:00 Registration in the Hilton Hotel
to 16:00 Tours and shopping opportunities

13:30 Meeting of the Task Force CSITC - Turgut Reis Room Hilton Hotel

19:00 Welcome Reception, Hilton Hotel

Monday, October 22, 2007

8:00 Registration at the Hilton Hotel

9:00 Inaugural Session
Chair: Ülker Güzel, Deputy Undersecretary for Foreign Trade

- o Welcoming Remarks by the Mayor of Izmir
- o Welcoming Remarks by the Governor of Izmir
- o Welcoming Remarks by Tuncer Kayalar, Undersecretary Foreign Trade
- o Welcoming Remarks by Kürsad Tüzmen, Minister of State
- o Welcoming Remarks on behalf of all delegates by the UK
- o Report of the Chair of the Standing Committee, Elena Cores, Ministry of Agriculture
- o Report PSAP John Mitchell, Cargill Cotton
- o Report of the Executive Director, Terry Townsend
- o Overview of the Agenda by Ziya Altunyaldiz, Chair Organizing Committee
- o Approval of the Agenda of the 66th Plenary Meeting

10:30 Tea/coffee

11:00 First Open Session: Strategies for National Competitiveness in Textile and Garment Industries
Chair: Halit Narin, President of the Turkish Textile Employers' Association (TUTSIS)

- o Ahmet Öksüz, Kipas, Outlook for the Turkish Textile Industry
- o Ziya Altunyaldiz, Government of Turkey, The Rapid Transition of Turkish Textile and Clothing Sectors in the Global Arena
- o Matthias Knappe, International Trade Centre, Competitiveness Requirements of the Textile Industry
- o Shafqat Ellahi Shaikh, All Pakistan Textile Mills Association
- o Mohamed Dhaoui, UNIDO, Upgrading Productive and Trade Capacities in Textile and Garment Industries
- o Discussion

13:00 Lunch for all participants

14:30 Second Open Session: Strategies for National Competitiveness in Cotton Production
Chair: Sabri Ünlütürk, Chairman Aegean Textile & Raw Materials Exporters' Association

- o Célestin Tiendrébéogo, SOFITEX, Competitiveness Ideas from West Africa
- o Rickard Laurin, Dunavant S.A., An Example of International Investment
- o Fatih Dogan, Akdeniz Exporters' Association, Logistical, Marketing and Quality Issues Affecting the Competitiveness of Cotton
- o Tugrul Yemisçi, Member Turkish Parliament, Izmir Cotton Exchange, Possibilities of Creating a Mediterranean Regional Market
- o Discussion

16:30 Adjourn

19:00 Cultural Performance 'Anatolia Cradle of Cultures' and Cocktail Prolong hosted by the Mayor of Izmir

Tuesday, October 23, 2007

8:00 Registration

9:00 Third Open Session: SEEP of Cotton Production
Chair: Sebahattin Gazanfer, Former General Manager TARIS

- o Allan Williams, Chair of the ICAC Expert Panel on SEEP, Interim Report from SEEP
- o Francesca Mancini, Vice Chair of SEEP, FAO, The Work of FAO related to SEEP
- o Mark Messura, Cotton Incorporated, Production Practices and Marketplace Realities: Improving the Competitive Position of Cotton
- o Discussion

10:30 Tea/coffee

11:00 Fourth Open Session: Outlook for Cotton Supply and Demand
Chair: Iskender Ozdemir, Adana Mercantile Exchange, Member of the Assembly

- o Report from the Secretariat, Outlook for World Cotton Supply and Demand
- o Report from the Secretariat, Costs of Cotton Production
- o Outlook for Chinese Supply and Use: Competitiveness of Chinese Cotton
- o Rajaram Jaipuria, Ginni Filaments Ltd. Outlook for Indian Supply and Use: Competitiveness of Indian Cotton
- o Talat Senturk, Ministry of Agriculture, Outlook for Turkish Supply and Use: Competitiveness of Turkish Cotton
- o Mark Lange, National Cotton Council of America, Outlook for U.S. Supply and Use: Competitiveness of U.S. Cotton
- o Hüseyin Velioglu, TARIS
- o Discussion

13:00 Lunch for all participants
Lunch meeting of the IFCP Secr. Gral. Conf. (by invitation)

15:00 First Plenary Session: Cotton and Multilateral Trade Negotiations
Chair: Hasan Yalçin, Deputy General Director of Agreements

- o Report from the Secretariat
- o Chiedu Osakwe, WTO
- o Aylin Bebekoglu, General Directorate of Agreements
- o Discussion (government representatives only)

17:00 Adjourn

19:00 Conference Dinner hosted by the Governor of Izmir

Wednesday, October 24, 2007

9:00 Second Plenary Session: Statements
Chair: Ziya Altunyaldiz, Deputy General Director of Exports

- o Statements from International Organizations
- o Statements from Member Countries

9:00 Breakout Session: Progress Toward Industry Standardization
Chair: Axel Drieling, Bremen Fiber Institute

- o Andrew Macdonald, Report from the Task Force on CSITC
- o John Beck, ICA, Report on Standardization of Trade Rules
- o Behzat Erten, Standardization for Foreign Trade, Standardization of Cotton in Turkey
- o Neal P. Gillen, American Cotton Shippers Association
- o Discussion

10:30 Tea/coffee

11:00 Second Plenary Session: Statements (continued)
Chair: Ziya Altunyaldiz, Deputy General Director of Exports

- o Statements from Member Countries
- o Statements from Non-Member Countries

11:00 Breakout Session: Demand Enhancement
Moderator: Jeff Silberman, Executive Director of the IFCP

- o Ira Livingston, Livingston Int'l Consultants, LLC, Building Demand for Cotton: Competition in the Global Market
- o Mark Messura, Cotton Incorporated, Influencing Chinese Consumers with Cotton Promotion
- o Panel Discussion by the IFCP

12:30 Lunch for all participants

13:30 Departure for Mother Mary's House and Ephesus
Alternative Technical Tour available

18:30 Return to Izmir, evening program open

Thursday, October 25, 2007

7:00 Breakfast meeting of plenary meeting host committees Sec General's Conference Room (by invitation)

8:00 Registration

8:30 Fifth Open Session (Meeting Committee on Cotton Production Research)
Chair: Oktay Gençer, Director, University of Çukurova
Technical Seminar: The Vision for Technology in 2025

- o Mustafa Ali Kaynak, Adnan Menderes University, Production Problems in 2025
- o Yechiel Tal, Hazera Genetics, Cotton Breeding in 2025
- o Mario Rodriguez Rico, Coalcesar, Farmer's Perspective for Cotton Production in 2025

Annexe 2

Déclaration du CIRAD à la 66ème Réunion plénière de l'ICAC ayant pour thème :

"*Strategies for National Competitiveness*"

Déclaration du CIRAD à la 66ème Réunion plénière de l'ICAC ayant pour thème "*Strategies for National Competitiveness*"

Le CIRAD s'exprime ici sur le thème des Stratégies pour une Compétitivité au niveau national en tant qu'organisme de recherche agronomique pour le développement. Il sera plus particulièrement fait référence aux pays producteurs de coton d'Afrique de l'Ouest et du Centre dont le CIRAD accompagne, par des recherches en partenariat, le développement de la production cotonnière depuis plusieurs décennies.

Les stratégies de production qui se définissent et se mettent en place aujourd'hui s'inscrivent dans des jeux de contraintes dans des domaines aussi divers que la climatologie, le commerce et les marchés internationaux, l'environnement, les sociétés ... Ces jeux de contraintes sont en pleine évolution, qu'il s'agisse du changement climatique global, des cours relatifs du coton, du pétrole et de ses dérivés (fibres synthétiques, carburants, énergie, engrais chimiques, pesticides ...), des attentes des sociétés civiles sur les questions environnementales ou de celles des consommateurs sur les produits de demain. L'accès à l'information sur ces évolutions et la capacité à utiliser de manière efficiente les systèmes d'information existants, constituent des atouts essentiels à la définition de stratégies pertinentes dans le domaine de la compétitivité de la filière cotonnière.

Les cours mondiaux du coton et du pétrole placent actuellement les fibres naturelles en bonne situation de concurrence vis-à-vis des fibres synthétiques. Le coton devrait bénéficier de cette situation conjoncturelle du marché. Cependant dans le processus de production, l'accroissement des charges variables correspondant aux carburants, engrais et pesticides influe fortement sur les coûts de revient de la fibre de coton. Ces coûts de revient importants limitent fortement la marge des producteurs de coton. La réduction des marges des producteurs de coton africains est aggravée par le fait que les filières cotonnières financent l'essentiel des facteurs de production en monnaie forte (€ ou franc CFA) et commercialisent la fibre en dollar nord américain déprécié. Ailleurs dans le monde, notamment aux USA et en Europe, la baisse de la marge des producteurs est compensée par des subventions.

En réponse à ce contexte économique défavorable, les producteurs des zones cotonnières africaines adoptent une stratégie d'extensification de leurs systèmes de culture. Cette stratégie correspond à une réduction importante des intrants et en particulier des apports d'engrais. Les répercussions de cette extensification sur les rendements du cotonnier et donc sur les revenus des cotonculteurs, mais aussi sur les rendements des cultures vivrières en rotation et donc sur la sécurité alimentaire dans ces zones, sont inquiétantes. Par ailleurs, cette extensification qui correspond à une exploitation minière des sols, induit la dégradation de la fertilité des sols, elle engage de ce fait les agricultures de savanes sur une voie qui inspire le plus grand pessimisme.

L'intérêt grandissant pour les "énergies vertes" au Nord se justifie par les cours élevés du pétrole. Ces bio-productions pourraient rapidement représenter un marché très important, et constituer autant de productions agricoles alternatives à la production cotonnière. Un essor de la production de biocarburants au Nord laisse espérer une réduction significative de l'offre en fibre de coton sur le marché international. La hausse des cours internationaux du coton consécutive à la réduction de l'offre, pourrait bénéficier aux filières cotonnières africaines en crise financière profonde.

Des réformes des politiques agricoles des pays de l'Afrique de l'Ouest et du Centre ont été engagées dès 2002, elles visent à améliorer la compétitivité de la filière cotonnière africaine. Ces mesures ont été mises en œuvre dans le cadre du NEPAD, de la décision cadre de l'OMC de 2004 et de l'agenda pour la compétitivité de la filière coton textile de l'UEMOA. Les

réformes décidées en termes d'organisation du secteur cotonnier portent sur la libéralisation du secteur afin de réduire sa vulnérabilité par rapport à la volatilité des cours mondiaux. Le Bénin représente l'expérience sans doute la plus aboutie du processus de libéralisation et le moins que l'on puisse dire est que l'expérience est loin d'être concluante.

Ces réformes bénéficient du soutien de nombreux bailleurs de fonds notamment de la BAD et de l'USAID. Le programme d'investissement du projet BAD concerne outre le secteur cotonnier, le secteur du textile et de la confection avec pour objectif stratégique de créer une forte valeur ajoutée au secteur cotonnier. Ainsi dans ce secteur, il est proposé la mise en place d'un fonds de financement d'industrialisation et d'un fonds de promotion du textile Ouest-Africain. La question énergétique en Afrique de l'Ouest et du Centre représente sans doute un des obstacles majeurs au développement d'un tel programme.

Sur le secteur de la production cotonnière, les projets évoqués visent des gains en compétitivité à travers un meilleur ciblage des efforts d'intensification impliquant la participation des producteurs et de leurs organisations dans les prises de décisions et les mesures à mettre en œuvre. La capacité de mettre en œuvre une gestion intégrée des ravageurs du cotonnier et une gestion intégrée de la fertilité des sols, de ces programmes d'appui à la production sera déterminante sur les gains en compétitivité visés.

La compétitivité de la filière de production évaluée par la productivité des facteurs de production, place l'Afrique en tête avec des coûts de revient de la fibre de coton parmi les plus bas au monde. Cette performance repose sur des faibles coûts en main-d'œuvre salariée et des frais relativement bas en capital équipement et foncier. En dépit de la faiblesse de ces coûts de revient, les filières cotonnières africaines sont en situation de crise financière, et contraintes de développer des stratégies de gain en compétitivité dans le domaine de la qualité des cotons mis sur le marché international.

De telles stratégies sont soutenues par le programme qualité UEMOA lancé en 2001. Elles sont renforcées par un projet de standardisation de la mesure instrumentale du coton à des fins commerciales pour les pays producteurs de coton en Afrique (ICAC / CFC). Elles correspondent à court terme et de notre point de vue aux sources de gain en compétitivité les plus importantes.

Le CIRAD espère que la part croissante prise par les organisations paysannes dans la gouvernance des filières cotonnières africaines, jointe aux initiatives prises pour restaurer la compétitivité de ces filières, permettra de rétablir un contexte économique favorable au développement des zones de savanes en restaurant des conditions de vie décente pour quelques 20 millions de personnes qui tirent aujourd'hui l'essentiel de leurs revenus de la culture cotonnière. .

Annexe 3

Texte de la communication
"*The vision for technology in 2025*"
5ème session plénière.

Crop management in 2025

Cretenet M., Fok M., Hau B., Vaissayre M.
CIRAD, Montpellier, France.

Strategic and tactical decisions guided by economic risks and environmental impacts ...

- Imagining what cotton growing systems might be like in 2025 is a particularly uncertain exercise because of (i) climate patterns (global change) and erratic fluctuations in economic contexts (markets, subsidies, supply and demand), and (ii) uncertainty with regard to the progress of research (new technology) in the next two decades.
- However that may be, it is strongly probable that the contexts of uncertainty on international cotton fibre markets and the climatic "anomalies" now observed will not have been solved by 2025. Thus cotton growers, wherever they operate, will face this twin uncertainty of market and climate and will therefore have an increasing need to use risk indicators in decision making. This will apply in both the strategic choice of a fibre market segment and in the choice of cultural techniques during the farming season.
- Furthermore, the increasing segmentation of the cotton fibre market as a result of the production of organic cotton, fair trade cotton, genetically modified cotton and 'traditional' cotton, combined with the classification of the fibres marketed, will result in an increasingly broad range of potential marketing channels, forming so many opportunities for an informed grower.
- The environmental preoccupations underlying this market segmentation should increase under pressure from political leaders, civil society and consumers. The awarding of labels based on the reduction of environmental impacts related to the cropping system will result in specifications for growers that limit the options to a range of cultural techniques that varies according to the label; this will have effects on production potential and production costs.
- Growers will therefore have to make strategic choices among an increasing variety of opportunities and it can be considered that market information systems will develop strongly, especially via the Internet, to provide the aid expected by producers in strategic decisions.
- The possible technical alternatives and the development of coherent crop management sequences in tactical management decisions for cotton once the strategic choices have been made (the sector segment targeted and the fibre quality chosen) are addressed here.

We feel that the main trend in the evolution of crop management sequences in cotton growing should be greater mastery of the quantity and quality of the fibre produced in order to increase competitiveness in a given market segment. The questions underlying the coexistence of the different sector segments (organic cotton, genetically modified cotton, fair trade cotton and traditional cotton) in the same territory, and with dimensions related to politics and society may form the main dampener for this scenario.

Decision support systems for the management of increasingly complex farming systems ...

- The diversity of environmental conditions (soil, climate, pests and diseases), of types of production (manual, draught cultivation, motorisation), of cultural techniques (varieties, tillage, fertilisers, pesticides, etc.) and of market segments goes beyond individual capacity for appraisal and requires the use of modelling in producers' decisions (Sequeira 1997; Keating 2003; Stöckle 2003).
- The interface between these biophysical models and the producer consists of decision support systems (McKinion 1988; Lemmon 1990; Hearn 2002; Hoogenboom 2003; Van Ittersum 2003) that incorporate a human component (the agricultural advisor) in smallholding cotton production zones.
- Such use of models will be all the more necessary as the criteria for the evaluation of cultural techniques and crop management sequences must (i) integrate economic and environmental risk indicators, and (ii) apply to scales larger than that of the field (farm, landscape unit, supply zone, region, etc.).
- The constraint for each type of producer to increase competitiveness to gain a foothold on the market will require a simultaneous rational approach to both the productivity and quality components of his production. The reasoning will make increasing reference to the production potential (yield and quality) specific to the situation of each grower. This spatial component of decision support refers to the 'precision agriculture' concept (Lowenberg-DeBoer 1999; McBratney 2005) that should therefore no longer be reserved for the most intensive farming systems.
- The production target chosen at the individual level will be compromises between economic margins to be maximised, risk levels accepted by the grower and the negative environmental impacts to be kept to a minimum.

Production potential and the evaluation of climate-related risks ...

- The evaluation of production potentials in cotton growing in which climate (sunlight, precipitation and temperature) is the only constraint is essential information for the rational addressing of crop competitiveness. Reducing the climate-related potential by taking the soil constraints into account makes it possible to gauge the efforts to be made in

soil improvement. These appraisals form the basic reference material for a rational approach to production objectives. Decision support systems will make it possible to specify at the scale of the grower what the 'suitability for cotton production' concept consists of - a concept developed at other scales for decision makers (politicians and planners) other than producers.

- Inter-annual climatic swings are a source of more or less marked variations in cropping performance, interacting with the crop management sequences used. It is important that the decision support systems intended for producers should make it possible to evaluate the resilience of crop management systems in long observed or generated series of climate data (Cretenet 2003).

Respect of the specifications of decision support systems requires substantial progress in soil science models ...

- Soil is certainly the main determinant in plant cover heterogeneity. The accuracy and reliability of the decisions suggested by the system depend on the capacity of decision support systems to integrate such soil heterogeneity and hence crop heterogeneity. The techniques used in precision agriculture to address these relations between soil heterogeneity (Nielsen 2005) and crop response to this variability are an essential application here.
- Conversely, in terms of scale transfer, decision support systems will incorporate functions for the evaluation of runoff erosion risks, the risks of nitrate pollution of groundwater and fertility transfer from the sylvo-pastoral sector to the cultivated sector in terms of carbon, in particular via herds and flocks. The main expected 'innovation' in soil sciences is the taking into account of the geographic referencing of soil variables and data in decision support systems.
- Some of the essential functions for the development of choices in tillage, fertilisation, crop residue management, crop rotations or combinations of crops and cover plants and the integrated management of soil biological pests (Hall 1996) have already been integrated in cotton growing models. Others are independent models or modules for model plants other than cotton and yet other are currently being developed. Our analysis is limited to mentioning several functions that we consider important for responding to producers' expectations with regard to crop management.
- With regard to the physical (Roger-Estrade 2000) and chemical components of the soil, it is necessary to integrate both (i) the functions of physical support for the crop, enabling the simulation of plant rooting and that of water flows in both rainfed (Braudeau 2007) and irrigated farming, and (ii) the functions that determine the mineral nutrition (N, P and

K) of the plant (Claassen and Barber 1976; Scopel 2005). It must be possible to simulate tillage techniques combined or not with mulch, especially with regard to their impacts on water flows and also their interaction with weed management (Séguy 1999). The 'biological pump' effect in which nutrients are leached to a depth in the soil of certain crops combined with or rotated with cotton and soil acidification processes linked to certain fertilisers and aggravated by the leaching of exchangeable bases in the soil as a result of strong interaction with mineral uptake should be incorporated.

- As regards the taking into account of the soil biological component, soil biological activity (Spain 1992) in its interactions with the carbon and nitrogen cycle must be incorporated and thus make it possible to appraise both the mineralisation of soil organic matter during the cropping season, its cation exchange capacity (Balesdent 1996), that of soil structure stabilisation and its role in the long term in carbon sequestration by a cropping systems (Falloon 2002; Krull 2003). As soil organic matter plays a prime role as a component of soil fertility in the sub-Saharan cotton zones, this function will make it possible to appraise the sustainability of the cropping systems used there.

Characterisation of the 'agro-physiology functioning' of varieties ...

- Expectations of plant models in terms of function concern the characterisation of the agricultural response of varieties to abiotic and biotic stresses. This response results from crop yield build-up processes and lint quality.
- Hence the aim of modelling heterogeneous plant cover determined by soil heterogeneity (see above) is also present in the varietal field, with the determinants being competition phenomena (for light, water and minerals) both in intra-specific populations (reseeding, varietal mixtures) and inter-specific populations (crop associations, mixed cropping, alley-cropping, etc.).
- Furthermore, the aim of describing the 'agricultural functioning' of a field in terms of the technological characteristics of the lint produced will require the replacement of the functioning of the 'average plant' in most current models by representation of the 'population' (Cretenet 2003) to be able to take into account the determinism of the heterogeneity of the crop profiles within a field.
- To provide a partial answer to the questions raised by the joint existence of certain chains—organic farming and genetically modified cotton for example— and also to evaluate certain environmental impacts with regard to biodiversity in particular, the question of determinism and its varietal component in gene flows (Fargue 2003) should be incorporated in the decision support systems of the future.

Integrated pest management involving multiple scales in crop protection ...

- Weed management in cotton systems should be included in decision support systems in 2025 and raises once again the question of the modelling of heterogeneous multi-species populations that may take allelopathy phenomena into account. This also concerns the introduction of cover plants in the integrated management of biological pests (Cook 2007).
- The advantage of mixtures of varieties with regard to the development of diseases in cereal growing (Finckh 2000) deserves *ex ante* evaluation in cotton growing using heterogeneous population models linked to models of the spread of pests or diseases.
- Such possibilities assume that cotton (variety) / boll worm pests (Nibouche 2007), pricking insects, bacteria and fungi are modelled with 3-D representation of the cover (Hanan 2003; Yan 2004) to make it possible to integrate the dynamics of the spread of biological pests and to locate damage to plants and its consequences for production quality. Such prospects also assume that the resistance and/or attractiveness characters with regard to the various biological pests are taken into account as cotton variety parameters.
- All the techniques used today in integrated pest management must be accessible in decision support systems. This assumes that models of pest populations dynamics include relations between pests and beneficials and the degree of speciation within an agrosystem.
- These models of population dynamics of pests will also incorporate the parameters that depend on the gaining of resistance to xenobiotics (active insecticide substances and toxins expressed by transgenic cotton plants) according to the cotton cropping system used (Vaissayre 2006; Nibouche, Guerard et al. 2007) and the ecosystems in which they are set (the proximity of vegetable crops, natural ecosystems, etc.).

Transfer of knowledge in numerous fields to enrich farmers' expertise and guide agricultural policies ...

- The main challenge to be taken up to attain the scenario mentioned is the assembling of knowledge in different scientific fields (soil science, physiology, biology, entomology, weed science, etc.) at different scales of space (organ, plant, population, cropping system, farming system, agrarian system, etc.) and time (day, 10-day period, season, year, decade).
- The ergonomics of the systems that enable cotton growers to gain access to this knowledge is an essential factor in the development and operational level of transfer. This

interface between scientific expertise and farmers' expertise must take the social and economic contexts into account. A participative approach makes it possible to respond to the constraints of such exchanges (Bousquet 2002; Dawn 2003). Cotton growing in family farming should be the main beneficiary of this knowledge transfer process.

- The capacity of the system relating production by volume and quality to crop management sequences and their environmental impacts allowing objective evaluation of the costs of gaining sustainability for farming systems gives the tool an essential political dimension (Van Ittersum 2006).

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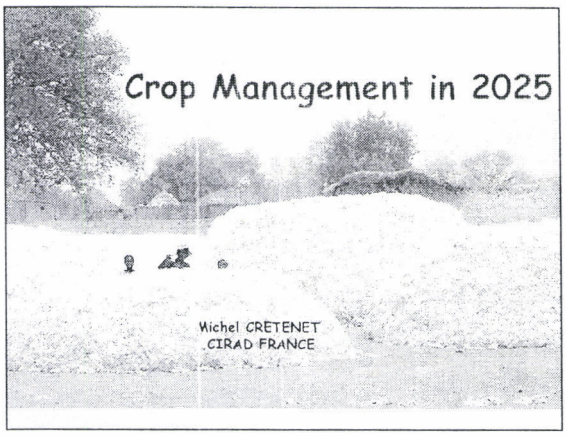
Annexe 4

Diaporama de la communication :

"*The vision for technology in 2025*"
5ème session plénière.



DSS for the management of complex cropping systems ...

- DSS have to deal with both productivity and quality components of competitiveness.
- Integrated crop management have to refer to site specific cotton production potential. DSS will integrate and enlarge the application of precision agriculture concept.
- DSS outputs will suggest compromises between economic margins, resilience of crop management sequence and environmental impacts.

Economic risks and environmental impacts as a framework in decision making ...

- Choice of a fiber segment market and a crop management sequence to face uncertainties of market and climate.
- Under pressure from civil society and consumers, emergence of an increasing demand of fair trade cotton and organic cotton.
- Increase of the cotton fiber market segmentation as combination of labeled cropping systems and fiber classification.

DSS require substantial progress in soil models ...

- Soil remains the main determinant of plant cover heterogeneity witch represents a big challenge in cotton crop modeling.
- Fertility transfer (carbon) in the agro-sylvo-pastoral system and groundwater pollution (nitrate) issues suppose DSS with the facilities of multi-scaling and geographic referencing.

Economic risks and environmental impacts as a framework in decision making ....

- Increasing need of real-time informations on the cotton market for cotton growers' strategic decision-making.
- Tactical decision making concern the crop management sequence aiming to reach given yield and quality targets in a given market segment.
- Which kind of decision support system (DSS) will take up such a challenge ?

DSS require substantial progress in soil models ...

- A global systemic approach including physical, chemical and biological components of the soil functioning to allow:
  - Plant rooting process,
  - Nutrients and water flows and assimilation,
  - Carbon and nitrogen biological cycles.

DSS for the management of complex cropping systems ...

- The huge range of environmental conditions, farming systems, and cultivation techniques requires the use of modeling in farmer's decisions.
- DSS interface biophysical models and farmers through an agricultural advisor in the case of smallholding production zones.
- DSS must integrate economical and environmental risk indicators, and apply to scales larger than that of the field (farm, landscape unit, producing area ...)

Agro-physiology functioning of varieties ...

- Characterization of the agronomic response of varieties to biotic and abiotic stresses.
- Competition between plants (intra-specific) and between crops (inter-specific) in heterogeneous plant communities.
- Take in account varietal component in gene flow for the environmental impact assessment of crop management sequences.

Multi-scaling ICM and IPM issues ....

DSS should take in charge:

- allelopathy phenomena between weeds and crops of multi-species plant communities.
- cover plants in the integrated management of biological pests,
- effect of varieties mixture on the spread of pests and diseases.
- A 3D plant cover representation to integrate the spread of pests and locate damages.

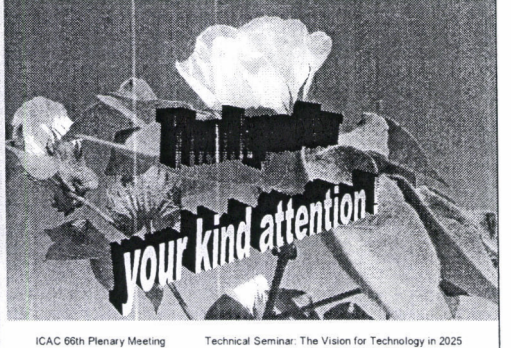
Multi-scaling ICM and IPM issues ....

- Models of pest populations dynamics should include relations between pests and beneficials and the degree of speciation within the agrosystem.
- Assess the development of pests' resistances to xenobiotics (insecticides and GMC toxins) according to practiced cotton cropping systems and ecosystems in which they are set.

Transfer of knowledge to enrich farmers' expertise ...

The main challenges consist in:

- assembling the knowledge in different scientific fields, at different scales of space and time,
- getting appropriate ergonomics of the system to allow understanding between scientifics and farmers.
- accepting the political dimension of such a system relating production, crop management, environmental impacts and sustainability.



Annexe 5

Texte de la communication sur le projet CFC/ICAC/33

CSITC Activities for Assuring the Reliability of Cotton Instrument Testing in Africa

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Abstract

The International Cotton Advisory Committee (ICAC) Task Force on Commercial Standardization of Instrument Testing of Cotton (CSITC) was created for achieving reliable instrument test results for the global cotton trade. The objective of an approved CFC/ICAC project is to assist the cotton producing countries in Africa to join this international effort. A concept was developed, including the establishment of Regional Technical Centers (RTCs), which are responsible for supervising the cotton testing facilities in the chosen regions, for transferring knowledge from the international level to these laboratories, and for checking and therefore for assuring laboratory test results according to CSITC requirements.

Introduction

The industry demands for objective and reliable cotton fiber test results are increasing rapidly, and major cotton importing countries are integrating instrument based data in trade. Cotton with insufficient verification of its quality will result in price discounts for the producers or exclusion from the market. Only a worldwide harmonized control and testing system can favor a frictionless business for all participants in the whole commercial chain.

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 various global markets. But, up to now, there is no adequate international verification over the world of other test laboratories and of their results. The availability of high volume cotton testing instruments solely is not satisfactory to produce reliable test values: examples from all over the world show that, without certified testing procedures, the results will be disregarded and therefore are worthless. The results have to be reliable and at 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 quality assessment system.

For the purpose of achieving reliable instrumental test results for the global cotton trade, the ICAC-CSITC Task Force (Commercial Standardization of Instrument Testing of Cotton) brought together representatives of spinning mills, traders, cotton producers and research. This group has made several recommendations to build a worldwide system for classifying cotton productions and encourages the use of "standardized instrument testing for cotton" (SITC) devices as it can provide reliable results that can be used by the trade.

An important need for technical assistance expressed by Least Developed Countries

However, ICAC got questions and concerns back from Least Developed Countries (LDCs)

related to these CSITC recommendations as not all producers can afford the purchase and the maintenance of all the necessary equipments, and may observe lacks of knowledge and competence for running these "complex" systems.

An ICAC project was then developed to be funded by the Common Fund for Commodities (CFC) with co-financing by the European Union. Based on the recommendations and conclusions of the ICAC CSITC meeting in Mumbai in 2004 [ICAC], the objective of this CFC project is i) to assist the cotton producing countries, especially the developing countries and Least Developed Countries and ii) to meet the emerging quality assessment demands of the global cotton market so as to strengthen or at least maintain their competitive position in the world market by keeping up with modern developments from the end-markets. Therefore, it is essential to enable these countries to supply their cottons with objective and reliable instrument-based quality information, based on internationally accepted test rules and procedures.

The aim of the project is to improve the integrity of worldwide cotton trade by establishing a reliable system of instrumental cotton characterization, adoptable by all cotton producing countries, especially developing countries. Therefore, the following measures have to be achieved:

- Introduction of a worldwide acceptable, adoptable and reliable instrument based cotton quality assessment having defined test rules and being based on a worldwide system to certify cotton testing laboratories.
- Support to African laboratories, so that they will be able to fulfill the international requirements for reliable instrument testing of cotton. This will be done mainly by providing the necessary assistance for the application of instrument testing in cotton testing laboratories. Especially education and expertise will be essential for a successful setting-up of a network of well harmonized laboratories to satisfy the cotton testing demands.

Background and ideas to transfer from the international side to the classing laboratories to build confidence at the trade level

Confidence in the cotton classification system is an essential key to trade cottons on quality assessment results, especially when these results are produced by measuring instruments.

The preparation and provision of information to assist the implementation of instrument testing in the trade rules is planned in the first components of the ICAC/CFC project which is designed to create/increase the necessary confidence in the instrument classification by establishing an international and agreed system to check laboratory reliability and enable confidence in results produced by instruments. This requires the preparation of a sound basis for testing, including e.g. a comprehensive test method including all aspects of standardized instrumental testing.

The CSITC Round Test, as explained in "Development of a Regular CSITC Round Trial" by Drieling [Drieling, 2007] is a key action to insure that laboratories will finally meet a "common reading level" with the instruments, an important step to install the credibility of the system.

By participating in this Round Test including a certification process, laboratories can prove that they are able to perform well and to produce reliable results periodically. However, even if a laboratory is periodically performing well at the CSITC Round Test, it also has to prove its good performance on a daily basis to its customers.

This usually is possible in actual instrumented classing offices as they already got a lot of knowledge and skills to run and to maintain all the necessary equipments, to check the produced results, *etc*. This project aims to transfer all this knowledge to the classing laboratories installed in the LDCs.

A method of transferring knowledge and competences to classing laboratories

The goal: Transferring knowledge from international to local competences

Transferring knowledge usually requires time, availability and proximity of experts to answer questions as they come. However, the actual situation shows that the knowledge in the instrument testing of cotton is available in laboratories (for instance in USA, Europe, ...) which often are far away from where it is needed (e.g. in LDCs).

Thus, the establishment of training centers in a "close" surrounding of the classing laboratories becomes a strong key of success to achieve an optimal transfer of knowledge. As these local / regional centers will be close to the classing laboratories, they will be able to bring them other services and support. However, these centers will have to become financially sustainable after the end of the project.

These two main complementary ideas, proximity and sustainability, were the driving forces to decide about the importance of the area in which centers have to bring services the classing laboratories; the proper size was found to be a Region of several countries; the project will then establish "Regional Technical Centers" (RTC) in various regions in Africa to support classing laboratories in the countries, and transmit them the CSITC recommendations from the international side (Figure 1). If efficient, this concept of transferring knowledge thanks to RTCs may be extended around the world after the end of this project.

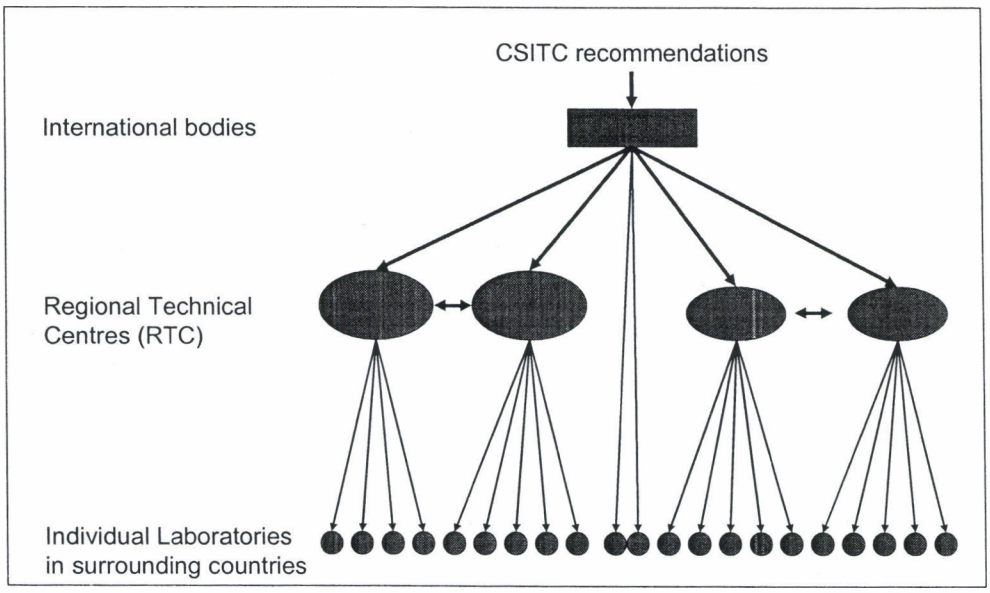

Figure 1: Proposed organization to transmit and share the knowledge.

Activities from the international side toward the RTCs

In general terms, the first role of the international side, represented by the ICAC-CSITC Task Force, is to recommend fair rules that can be applied worldwide. As the CSITC Task Force is part of an Advisory Body, it has a large forum to inform all the involved bodies about the new recommendations made. However any way of dissemination of such information is a positive manner.

According to this project, the main role of the international bodies consists in transferring their knowledge to the experts who will manage and/or work for the RTCs. Intense training sessions (at least by given by FIBRE, CIRAD, USDA AMS, ACSA/Rhodes College, Premier Polytronics and Uster Technologies) will be offered to experts to help them in getting the necessary knowledge and the keys to transmit it to final users. The experts will also visit various locations

where various levels of application of CSITC recommendations can be met.

Activities of the RTCs toward the laboratories

In order to directly support laboratories in Africa during their routine work, RTCs will be responsible of three main roles:

a) **to provide information** to managers and personnel of laboratories in the region thanks to:

- training sessions: the training program will be set by the RTCs experts in accordance with the CSITC recommendations. These training programs are designed for i) cotton testing laboratories according to instrument testing and additional visual classing, ii) for cotton testing laboratories on quality management and laboratory management and iii) for staff in the cotton chain to realize the complexity of quality, its dependencies and its influences on the subsequent steps;
- expertise which are also planned on site to inform and help laboratories to improve their practices,
- collection and a dissemination of technical information toward laboratories.

b) **to have a role of reference** in the region with the following activities:

- participation to the international certification system: the laboratory of the RTC shall participate to the CSITC Round Test as it will state about its ability to perform according to international recommendations;
- laboratories in the region will be encouraged by the RTC to participate to the CSITC Round Test to state their abilities to run their activities in accordance to the international recommendations; moreover, it will help the RTCs to prepare their training sessions and their expertise to the laboratories;
- creation and running of a regional round test to level out all the laboratories in the region with the homogeneous cottons from that region; this will allow all laboratories to check their results to the results of the RTC, and to raise questions to be answered by the RTC; laboratories will be willing to participate to this round test as it helps knowing which support to get from the RTC in the near future; these activities will only insure that, on a periodic basis, laboratories are able to produce reliable data; this is not enough to build the confidence in the results;
- participation to the regional retest system will be encouraged by the RTCs. In this retest system, samples already analyzed by the classing laboratories will be randomly selected on a daily basis for an independent analysis in the RTC. The results from the laboratories and the one from the RTCs will be compared, and, if necessary, according actions and remedies will be conducted;

c) to **test cotton samples** for the regions by running on demand, expertise in the laboratories will also be made by the RTCs Experts, in partnership with international experts.

The activities of the RTCs will be focused on the specific regards and questions of all countries in the covered regions. For this purpose, a board of members representing cotton laboratories, cotton stakeholders and governmental interests in the Region will be created to plan and to check the activities of the RTCs on a regular basis.

Activities of the laboratories

The final target of this project is the support to laboratories as a request for support from them was placed in front of the ICAC. The project being on the way, laboratories will receive help from the RTCs; this support will first be paid by the Funds during the project before being made against invoicing to insure the sustainability of the RTCs.

Laboratories will have the responsibilities of following the CSITC Task Force

recommendations, such as participating to the CSITC Round Test, respecting the instrument calibration recommendations, respecting ambient air conditions in the laboratories, for producing reliable results.

Application of the concept to the CFC/ICAC project

The main objective of the CFC/ICAC project is to bring additional knowledge to Africa

This principle of action for developing the credibility and the use of instrument testing was developed in a project to be funded by the Common Fund for Commodities (CFC) with the support of the ICAC. However, we rapidly discovered that this project would require a larger support than the one which can be brought by CFC alone. The European Union (EU) was then approached to provide a complementary funding. All details about this project can be found on the www.icac.org website (CFC/ICAC/33 Project).

Once the recommendations are proposed by the CSITC Task Force, they have to be applied; two components of the project aim at implementing the necessary worldwide activities that also have to be applied in Africa. Two other components are organizing the activities in Africa so that the CSITC Task Force recommendations will also be applied in Africa.

For African specific components, Regions Technical Centers will be created

According to various objective criteria (production levels, languages, distances...), choices were made to support Africa in its effort to adopt instrument testing for its productions. Taking into account all the activities to be achieved by the RTCs and the wide distances between the laboratories to support, it was finally decided to install two RTCs (Figure 2):

- West Africa: CERFITEX textile school, in Ségou, Mali, in cooperation with SOFITEX classing office in Bobo Dioulasso, Burkina Faso, to support directly West African laboratories and indirectly Central African laboratories;
- East/Southern Africa: Tanzania Bureau of Standards (TBS), in cooperation with the Tanzania Cotton Board (TCB), both in Dar es Salaam, Tanzania, to support directly Eastern and Southern African laboratories and indirectly North-East African laboratories.

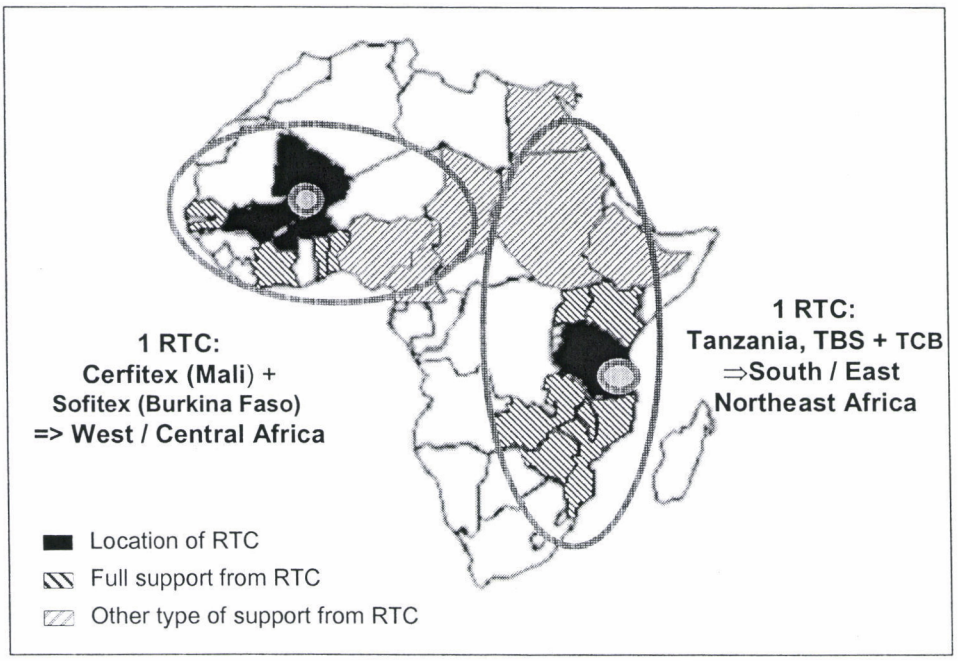

Figure 2: Regions and partners.

The activities listed in the paragraph "Activities of the RTCs toward the laboratories" above will be performed from these RTCs (Figure 3). However, due to the distances, some activities will be easier to perform than others for some regions in Africa. For instance, there is almost no difficulty to plan training sessions from one country to another, while it becomes difficult to get an efficient retest procedure when distances and delivery time increase between laboratories and their RTC.

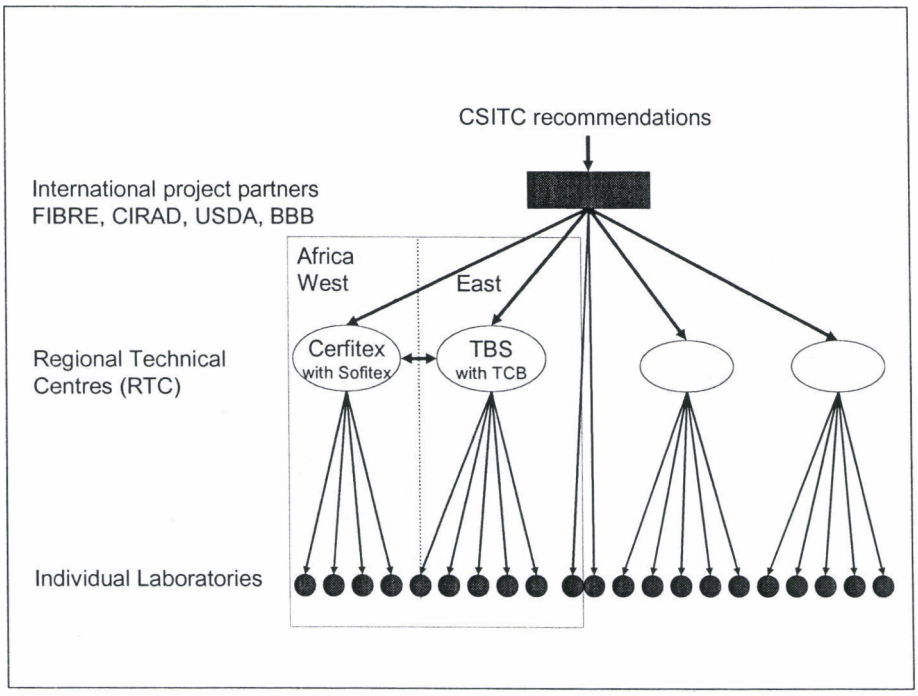

Figure 3: Support Structure applied to Africa.

Full direct support will then be provided to the nearest countries in the surroundings of the RTCs (in the countries in blue and red colors in Figure 2), while some activities will be applied according to a different manner (with pink color in Figure 2 and labeled as "indirect support" in Table 1) for more distant countries which can be serviced by both international and RTC sides.

Table 1: List of Cotton Producing Countries supported by this CFC/ICAC project, and their production levels*.

Direct project partners	*Additionally supporting Countries*	*Countries to be directly supported in West Africa*		*Countries to be directly supported in East Africa*		*Countries with indirect support*	
Germany	USA	Benin	174,000	Tanzania	100,000	Cameroon	124,000
France		Burkina Faso	263,000	Mozambique	26,000	Chad	80,000
Mali		Ivory Coast	145,000	Uganda	41,000	Egypt	292,000
Burkina Faso		Mali	241,000	Zambia	75,000	Ethiopia	23,000
		Senegal	18,000	Zimbabwe	75,000	Nigeria	95,000
Tanzania		Togo	75,000			Sudan	114,000

*: Fibre production in tons in 2004-2005 (ICAC, September 2005), only countries with more than 10,000 tons of cotton production in season 2004/2005 are mentioned in this table.

The project will then directly support laboratories in Africa (Table 2); this list is based on the answers from different interviewed partners during the past year. It is necessary to update this list by directly contacting all responsible organizations in the countries; this will be one task in the full-fledged project.

From this list, we already see that instruments are in use in Africa compared to the situation observed in 1990 (Hunter, 1990) where only 4 instruments were reported in use at that time. However, interviewed persons, owners of laboratories and their representative are clearly expecting and welcoming an international support for implementing the CSITC Task Force recommendations. Thus they are grateful to the supporting funds and institution who will serve this project.

Table 2: List of existing instruments in Africa during the 2005-2006 season.

Country	*Type of use*	*Number of instruments*
Benin	Production, control, trade	4 SITC
Burkina Faso	Production	1 SITC
Cameroon	Production	SITC testing planned
Chad	Production	2 SITC
Egypt	Spinning mills, control	Approx. 10 SITC
Ethiopia		No SITC
Ghana		1 SITC*
Ivory Coast	Production, trade	4 SITC*
Kenya	Spinning	2 SITC*
Mali	RTC work and production, production	3 SITC (1 planned during this CFC/ICAC project)
Mozambique	Production/research	SITC testing planned
Nigeria		2 SITC*
Senegal	Production	1 SITC
South Africa	Production, trade and spinning	15 SITC*
Sudan	Research and production	3 SITC*
Tanzania	RTC work and production and control	3 SITC (1 SITC planned during this CFC/ICAC project)
Togo	Production	1 SITC
Uganda	Production and control	1 SITC
Zambia	Trade	2 SITC
Zimbabwe	Production and trade	6 SITC*

Additionally SITC instruments are used in Tunisia, Morocco, Lesotho, Mauritius, etc.

*: Verification for this quantity is necessary, as different answers were given.

From the beginning, it is important to know that the efforts placed in this project for the worldwide components and for the African specific components will continue after the funding for this project is ended. Indeed, the CSITC Round Test will continue on a fee basis for all participating laboratories and the training sessions performed by RTCs toward laboratories' personnel will continue for instance.

However, the recommendations will be kept and/or will evolve according to the needs of the cotton stakeholders.

Conclusions

Thanks to this CFC/ICAC project, the global use of instrument testing will be increased will be increased worldwide within the frame of the ICAC-CSITC recommendations.

These recommendations will also be disseminated in Africa thanks to the relaying support of newly created Regional Technical Centers who will support the laboratories in the regions of Africa.

This project is planned to start January 2007 and will last for four years to attain sustainable work with the objective of sharing the technical knowledge and to apply it according to the CSITC recommended rules to be applied for the final benefit of the cotton trade.

This project is the beginning of a standardized implementation of instrument classing worldwide and thus, the activities initiated during this project will have to be continued and new activities should be created to increase the worldwide use of instrument classing data by the trade on a daily basis.

Disclaimer

This project is being financed by the Common Fund for Commodities, an intergovernmental financial institution established within the framework of the United Nations, headquartered in Amsterdam, the Netherlands. This report has been prepared by the authors; the views expressed are not necessarily shared by the Common Fund for Commodities and/or the International Cotton Advisory Committee.

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International Cotton Advisory Committee, "Commercial Standardisation of Instrument Testing of Cotton" Task Force meeting reports, www.icac.org, periodic information available.

Hunter Lawrence, 1990, The growing use of HVI internationally, National Cotton Council Beltwide Cotton Conferences, pp. 556-557.

ICAC, September 2005, Production statistics.

Annexe 6

Diaporama de la communication sur le projet CFC/ICAC/33

CSITC Activities for Assuring the Reliability of Cotton Instrument Testing in Africa

Gourlot J.-P. and **Drieling A.**
CIRAD and FIBRE

Beltwide Cotton Conferences
New Orleans - 2007

Outline of presentation

- **Project: basis and requisites**
- Transmission of the necessary competences and skills
- Activities of the RTCs
- Necessary technical developments

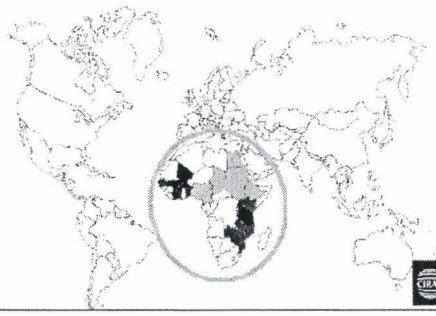
ICAC - CSITC

- **International Cotton Advisory Committee created the « Commercial Standardization of Instrument Testing of Cotton » Task Force**
- **Application of recommendations: Worldwide**
- **Example: CSITC round test...**

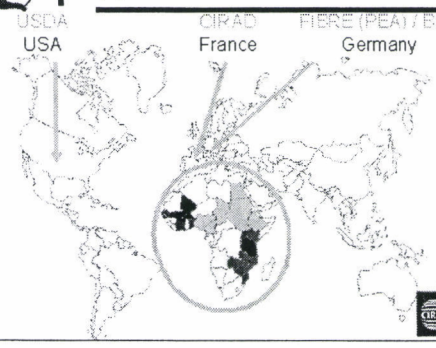
Project: basis and requisites

- **Demands for a technical support to apply the CSITC recommendations**
- **A CFC/ICAC project was created to answer to the demand, in particular toward African cotton laboratories to help them fulfilling the CSITC recommendations**

CFC/ICAC project level of application: Africa



CFC/ICAC project level of application: Africa



Outline of presentation

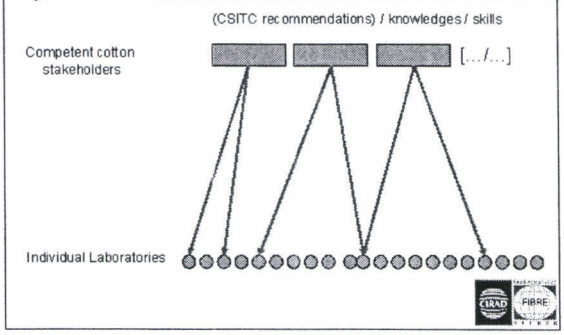
- Project: basis and requisites
- **Transmission of the necessary competences and skills**
- Activities of the RTCs
- Necessary technical developments

Actual transmission of knowledges and skills

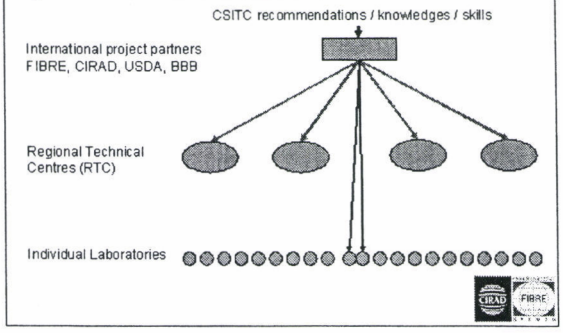
Competent cotton stakeholders [.../...]

Individual Laboratories

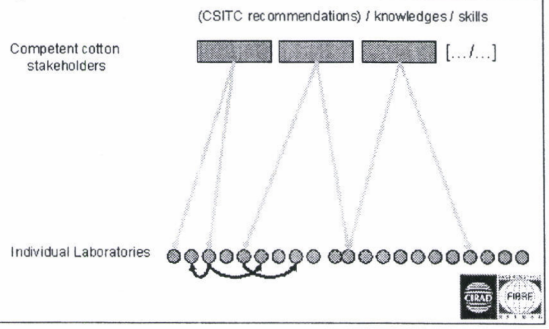
Actual transmission of knowledges and skills



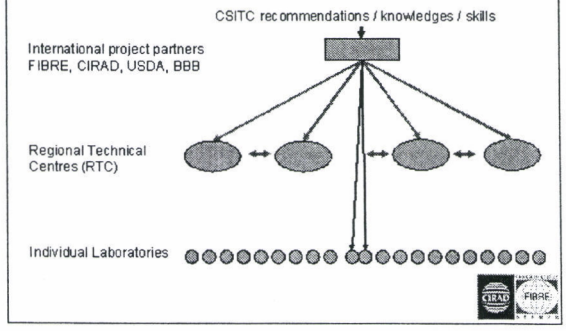
RTCs : a way to transmit knowledges and skills



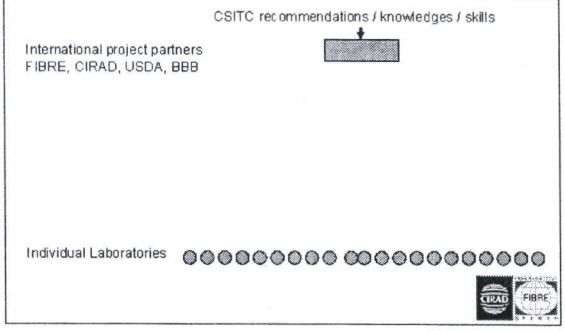
Actual transmission of knowledges and skills



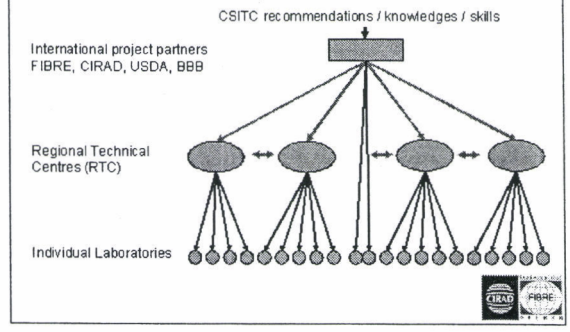
RTCs : a way to transmit knowledges and skills



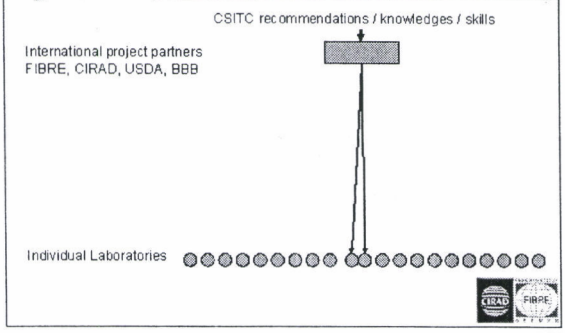
A way to transmit knowledges and skills



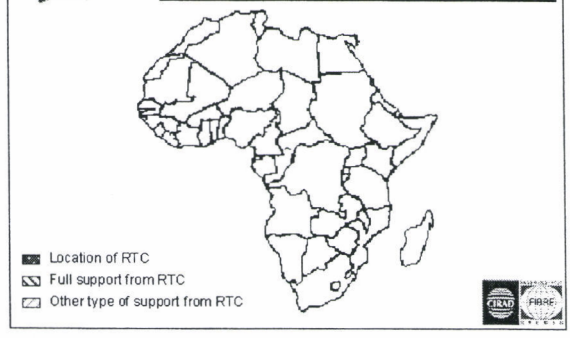
RTCs : a way to transmit knowledges and skills



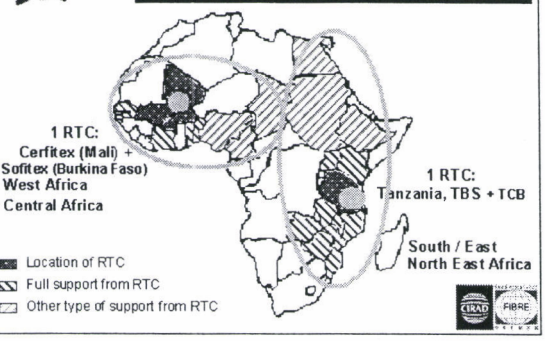
A way to transmit knowledges and skills



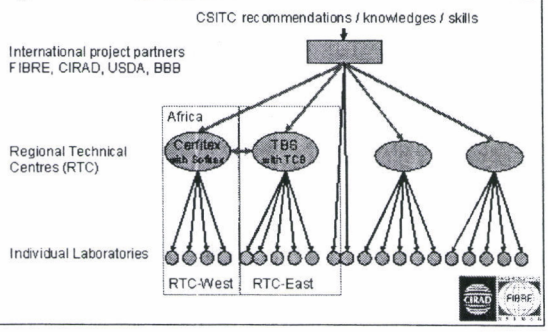
Development of Regional Technical Centres (RTCs)



Development of Regional Technical Centres (RTCs)



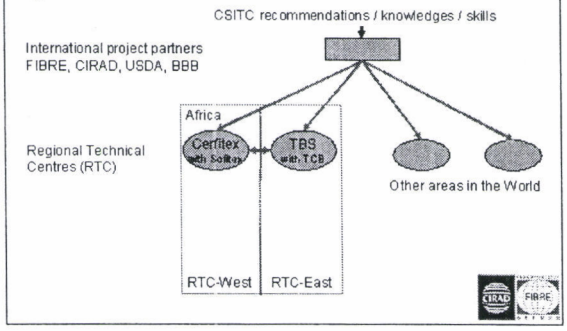
Development of Regional Technical Centres (RTCs)



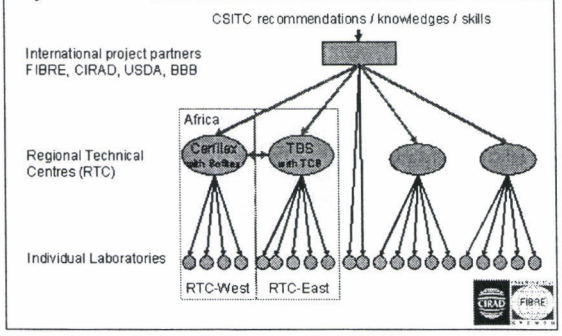
Outline of presentation

- Project: basis and requisites
- Transmission of the necessary competences and skills
- **Activities of the RTCs**
- Necessary technical developments

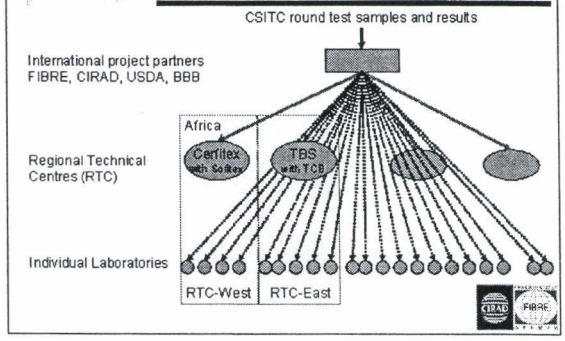
1- Training / Support / Expertises



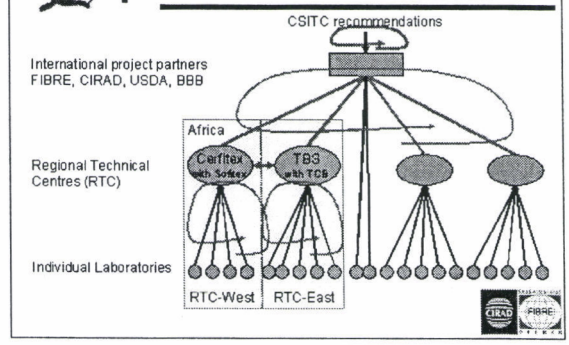
1- Training-Support-Regional round test



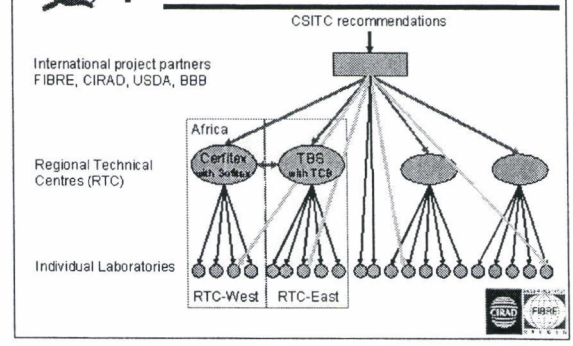
2- CSITC Round Test



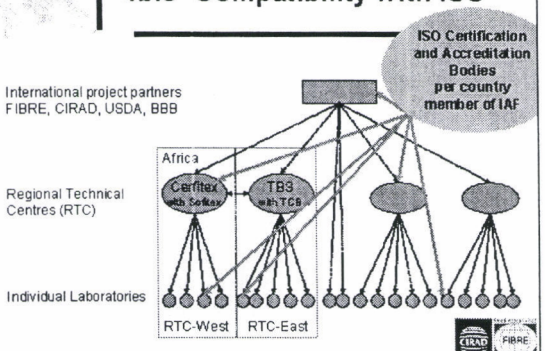
3- Retest



4- Audits and expertises



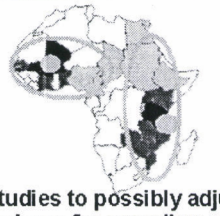
4bis- Compatibility with ISO



Outline of presentation

- Project: basis and requisites
- Transmission of the necessary competences and skills
- Activities of the RTCs
- **Necessary technical developments**

Component D of the project: Technical developments



Variability studies to possibly adjust the operating procedures for sampling and testing to insure repeatability and reproducibility of the results and their recognition worldwide

Official information

Thank you for your attention

Annexe 7

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