Australian Government
Cotton Research and Development Corporation

TRAVEL & CONFERENCE REPORT

Part 1 - Summary Details

Please use your TAB key to complete Parts 1 & 2.

CRDC Project Number: **CMSE1208**

Project Title: 31st International Cotton Conference

Project Commencement Date: 18/03/2012 **Project Completion Date:** 24/03/2012

Select Research Program (from CRDC Strategic R&D Plan 2008-2013):
Value Chain

Part 2 – Contact Details

Administrator:	Jo Cain		
Organisation:	CSIRO Plant Industry		
Postal Address:	Locked Bag 59, Narrabri, NSW, 2390		
Ph: 02 6799 1513	**Fax:** 02 6793 1186	**E-mail:**	jo.cain@csiro.au
Principal Researcher:	René van der Sluijs		
Organisation:	CSIRO Materials Science and Engineering		
Postal Address:	P.O. Box 21, Belmont, 3216, Vic		
Ph: 03 5246 4000	**Fax:** 03 5246 4057	**E-mail:**	rene.vandersluijs@csiro.au
Supervisor:	Stuart Gordon		
Organisation:	CSIRO Materials Science and Engineering		
Postal Address:	P.O. Box 21, Belmont, 3216, Vic		
Ph: 03 5246 4000	**Fax:** 03 5246 4057	**E-mail:**	stuart.gordon@csiro.au
Researcher 2	(Name & position of additional researcher or supervisor).		
Organisation:			
Postal Address:			
Ph:	**Fax:**	**E-mail:**	

Signature of Research Provider Representative: _____

Part 3 – Travel Report

(Maximum two pages)

1. A brief description of the purpose of the travel.

René van der Sluijs travelled to Bremen in March 2012 to attend the 31th International Cotton Conference and to participate in the poster exhibition during the conference. I was also asked to present a paper at the ITMF International Committee on Cotton Testing Methods as well as at the CSITC meetings prior to the commencement of the conference.

2. What were the:

- **major findings and outcomes**
- **other highlights**

(a) **ITMF International Committee on Cotton Testing Methods(ICCTM)**

Meetings attended by committee members and observers (~35 people)

- It is estimated that currently ~ 50% of the cotton produced worldwide is tested objectively using High Volume Instruments (HVI). Uster Technologies Inc. is the major supplier of HVI instruments with 2500 units installed to date, mainly in Asia. There are now 1500 HVI 1000's installed in the world and is now the benchmark HVI worldwide. Premier has 500 units installed and there are 40 to 45 units installed by Lintronics now known as Cottlab. There are now a number of other companies that have started to produce HVI instruments (i.e. Statex, Alfarimex and MAG) however no information has been forthcoming from these companies to determine the number of instruments operational worldwide.
- The ICCTM has formally recognised the Textechno Fibrotest instrument which measures fibre length and strength of all fibres shorter than 60 mm. The recognition was provided with the understanding that this instrument cannot be used for cotton classification but only for mill use. The Premier aQura HVI instrument was also recognised. There are ~ 189 instruments installed in 2011.
- There was a very interesting presentation by Dean Etheridge on a Lab spinner that has been converted to produce both standard Ring and Compact spun yarns. This is something that CMSE will follow up.
- I presented the findings of the Quarantine Treatment trials to the committee which was well received with a number of questions received from members and observers.
- Uster Technologies Inc. is looking at automating the measurement of Micronaire with the HVI 1000 Automat instrument. The principle being that after the measurement of fibre length the fibre will be transported to the chamber for Micronaire testing.
- USDA informed the Committee that the Short Fibre Index (SFI) value is available for calibration cottons. This can be used to calibrate HVI instruments which will reduce the variability of the SFI currently experienced.

(b) **International Cotton Advisory Committee(ICAC) Commercial Standardization of Instrument Testing of Cotton (CSITC)**

Meetings attended by committee members and observers (~ 40 people)

- Analysis of previous CSITC Round Trials have highlighted that fibre strength and Colour (Reflectance) are the two fibre parameters which show the biggest variation in results.
- The tolerances for both parameters cannot be further increased as the trade will not accept this. The tolerance for strength is currently +/- 2 g/tex and Rd +/-1.5 units.
- A number of reasons for these and other variations in general are attributed to:

- Calibration
- Operator
- Environment
- Given Technical prerequisites
- Given sample prerequisites

- Analysis has also revealed that there are no real differences between instruments (HVI 1000/900 and ART) in results for colour (Rd & b+).
- Also no real difference between results from the CSITC, USDA and Bremen Round Trials in results for colour (Rd & b+).
- USDA provided reasons for inter laboratory variation in colour results across laboratories are attributed to the following;
    - Colour heads needs servicing by manufacturer.
    - Dirty calibration tiles.
    - Infrequent calibration.
    - Infrequent or nonexistent calibration check
    - Colour is not important to some laboratories
    - Glass plane scratched or damaged.
- I presented the findings of our Quarantine Treatment trials to the committee which was again well received.
- The Draft Guide for Standardised Instrument Testing for Cotton, which is a comprehensive manual covering best practice for commercial instrument testing of cotton fibres from sampling to data reporting, was approved. The pleasing aspect from an Australian point of view is that extensive input into this Guide was provided by Ralph Schulze, Greg Parle and myself and is in many respects a continuation of the Australian Best Practice Handbook for Classing.

(c) **31 st International Cotton Conference**

Over 600 delegates from 40 countries attended the conference.

- With the introduction of the CSITC Round Trials in 2007 and the approval of the CSITC Guide for Commercial Standardisation of Instrument Testing of Cotton the next logical step is for laboratories to be certified by ICA/Bremen. Certification criteria are as follows:
    - Laboratory specification/conditioning
    - Instrument and maintenance
    - Calibration and internal verification
    - Testing procedures and samples
    - External verification
    - Quality management
    - Human Resources
    - On site inspection
- Currently assessors will be from USDA and Bremen Fibre Institute. I have discussed this with Axel Drieling and advised him of my experience in this field and willingness to participate as an assessor. He indicated that this will be considered once certification audits of laboratories commence in May 2012.
- There was an interesting presentation on the European Textile and Apparel Industry who attribute their ongoing existence and success on high value added products.
- Negative drivers for these industries are;
    - Environmental regulations
    - Energy and Raw Material costs

- Non respect for IPR
- Limited access to finance by SME's
- Value chain efficiency

- Some interesting facts were provided on Polyester;
  - 1% of a barrel of crude oil is used to produce petrochemical manmade fibres
  - 61 % of Polyester fibre produced in Europe is made from recycled plastic bottles.
  - Currently there is 30-35% overcapacity in installed plant to produce Polyester fibre
  - Cost of Polyester fibre is 70 cents/pound for raw material and 15 cents/pound for conversion which adds to 85 cents/pound for the fibre.
  - 'If cotton yields do not increase we will all be wearing Polyester.'
- The papers on the Cottonscope instrument presented by Geoff Naylor and Jimmy Rodgers were well received.
- I received some good feedback on the two posters depicting the Quarantine Treatment work that were presented at the poster exhibition.
- A presentation by the James Hutton Instititute showed that by using forensic science methods utilising the Isotope Ratio Mass Spectroscopy it is possible to discriminate between natural fibres but more importantly to determine the geographical origin of fibres.
- Cotton Incorporated provided feedback on the Life Cycle Assessment recently conducted. Results from this analysis can be found at; http://cottontoday.cottoninc.com/sustainability-about/Cotton-LCI-LCA-Executive-Summary/Cotton-LCI-LCA-Executive-Summary.pdf

3. Detail the persons and institutions visited, giving full title, position details, location, duration of visit and purpose of visit to these people/places. (NB:- Please provide full names of institutions, not just acronyms.)

As well as attending the International Cotton Conference I visited the Fibre Institute Bremen laboratory on the Open day and held discussions with various staff members and other delegates on the testing of cotton fibres and obtained an impression of the facilities and work conducted at the Fibre Institute.

4. a) Are there any potential areas worth following up as a result of the travel?
b) Any relevance or possible impact on the Australian Cotton Industry?

Attendance of the conference and the ITMF & CSITC working groups has been very beneficial in establishing and renewing acquaintances which may be beneficial in the future. The Australian industry is well respected in the various industry forums which will be to the benefit of the industry as a whole.
Had very constructive discussions with staff from Cotton Incorporated and USDA who have invited me to visit them on my next trip to the US in September 2012 to further discuss project ideas and to further explore synergies between the two organisations and CSIRO/Australian Cotton industry.

5. How do you intend to share the knowledge you have gained with other people in the cotton industry?

As well as this report, much of the knowledge gained will feed directly into active projects at CMSE which will disseminate information through the normal project channels.

6. Please list expenditure incurred. ***(Double click inside the table to enter the data)***

Date	Description	Amount excl GST	GST	Total
1/03/2012	Airfares	2,500.00		2,500.00
24/03/2012	Other fares	322.17		322.17
21/03/2012	Accommodation and meals	1,607.45		1,607.45
24/03/2012	Per Diem	300.00		300.00
24/03/2012	Other medical expenses	342.37		342.37
18/03/2012	Conference fees	836.15		836.15
18/03/2012	Poster expenses	184.09		184.09
				0.00
				0.00
				0.00
				0.00
			TOTAL	**6,092.23**