Australian Government
Cotton Research and Development Corporation

TRAVEL, CONFERENCE or SCIENTIFIC EXCHANGE REPORT 2016

Part 1 - Summary Details

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

CRDC Project Number: DAQ 1603

Project Title: The World Cotton Conference 6 – Goiania Brazil 2016

Project Commencement Date: 30/04/2016 **Project Completion Date:** 10/05/2016

CRDC Research Program: 4 People

Part 2 – Contact Details

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Signature of Research Provider Representative: _____

Date Submitted: 17/6/16

Part 3 – Travel, Conference or Scientific Exchange Report

(Maximum two pages)

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

Reasons for travel were to:

- Participate in the 6th World Cotton Research Conference.
- Develop networks and contacts within the international cotton research community particularly in area of crop protection.
- Learn about the most recent developments in crop protection and farming systems research from other parts of the world.

Promote research undertaken to manage cotton mealybugs in Australia.

2. What were the:

a) major findings and outcomes

b) other highlights

The WCRC 6, in Goiania, Brazil was attended by more than 500 delegates from 42 countries. Dr Sequeira made a poster presentation entitled 'Development of an Integrated Pest Management strategy for *Phenacoccus solenopsis* (cotton mealybug) in Australia'. The WCRC program included one plenary session and five parallel crop protection sessions devoted exclusively to crop protection issues from around the globe.

A plenary address by Dr Adam Kay (Cotton Australia) on the first day of the conference showcased Australia's cotton industry as a shining example of productivity and profitability, underpinned by successful innovation, world leading research, outstanding levels of grower adoption and technological/environmental stewardship.

Dr Sequeira's poster presentation drew the attention of entomologists from Brazil, India, Kenya and South Africa where lepidopteran caterpillars (pink bollworm, cotton bollworm), whiteflies and mealybugs are seriously established or imminent threats to the national cotton industries of these countries. Currently, Australia appears to be leading the international effort to develop effective and ecologically sustainable options for the control of the cotton mealybug. Entomologists from India and Africa are keen to develop collaborative associations and programs for mutual benefit.

Potential linkages and working relationships are indicated below:

- Dr. Zerihun Desalegn is the Cotton Projects Manager for the Solidaridad Network in Ethiopia. He indicated that mealybugs, Bemisia whiteflies and bollworms are very significant and growing threats to cotton production in Ethiopia and is keen to develop collaborative programs involving DAF Qld expertise for Eastern and Central Africa. The possibility of a visit to Africa was discussed.
- Dr. Shashikant S. Udikeri is a senior scientist (Entomologist) with the All India Co-ordinated Cotton Improvement Project. He is keen to develop a trans-pacific working group of researchers from his organisation, DAF Qld and Texas A&M University to research sucking bug (particularly mirid) ecology and management.

The above initiatives, if taken to fruition, will be of mutual benefit to the overseas collaborators and their industries as well as the Australian cotton industry. The learning from programs aimed at controlling whiteflies and mealybugs, in particular, will be relevant to the control of these pests in Australian cotton production systems.

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.)

On May 7, Dr. Sequeira attended a tour of the Brazilian Agricultural Research Corporation (EMBRAPA) research facility and field station in Goiania. The focus of research at this station in on breeding and agronomy. The tour group visited controlled environment facilities where cotton pre-breeding and cultivar screening was in progress and two field evaluation sites where crop rotation, agronomic trait and yield potential evaluations were underway. A particular highlight of the research station tour was an ingenious method for screening cotton cultivars for differences in root architecture using a glass sandwich technique which was pioneered by CIRAD researcher Marc Giband and his team in collaboration with Brazilian researchers.

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?

The cotton industries in Brazil and India are in a very precarious position with insect pests including the pink bollworm, boll weevil and cotton bollworm, whiteflies and mealybugs threatening their very survival. These developments highlight the exemplary status of the Australian cotton industry and could positively influence the market outlook for Australian cotton exports in the future if the cotton output in India and to a lesser extent Brazil is affected by technological and other crop protection-related failures.

An areas of research worth following up in terms of relevance to the Australian cotton breeding program is an ingenious method for screening cotton cultivars for differences in root architecture using a glass sandwich technique. This technique was showcased at the EMBRAPA research station facility tour on 07 May (see above).

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

Participation in Crop Consultants Australia meetings; cotton research and industry conference participation and presentation of findings at these and other events.

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

Date	Description	Amount excl GST	GST	Total
02/4-11/5	Travel accessories, vaccinations and medical costs, visa costs and postage, miscellaneous			595
2/05/2016	Printing fee - Goiania			39.27
8/05/2016	Taxi fare to airport - Goiania			15.71
29/4-10/5	Meals overseas			242.56
29/4-08/5/16	Accommodation - Goiania, Brazil			889.83
29/4-08/5	Airfares - Emerald-Goiania Brazil			3,788.73
29/4-11/5	Daily travel allowance			417.30
			TOTAL	**5,988.40**

Please email your report by 21 June 2016 to: research@crdc.com.au