



**REPORTS**

**Part 1 - Summary Details**

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

**CRDC Project Number:** US71  
**Annual Report:**  Due 30-September  
**Progress Report:**  Due 31-January  
**Final Report:**  Due 30-September  
 (or within 3 months of completion of project)

**Project Title:** Beltwide 2005 Conference and Scientific Exchange - New Orleans/ Washington DC/ Guelph (Canada)

**Project Commencement Date:** 3/1/2005      **Project Completion Date:** 12/2/2005  
**Research Program:** - Please Select One -

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## ***TRAVEL REPORTS***

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

This travel was granted (with support funding from the Cotton CRC) to participate in the 2005 Beltwide Cotton Conference, January 4<sup>th</sup>-7<sup>th</sup>, New Orleans, USA, to visit the USEPA in Washington, DC, USA, and to carry out research within the Centre for Toxicology, Department of Environmental Biology, University of Guelph, Ontario, Canada.

### **2. What were the:**

#### **a) major findings and outcomes**

Several findings and positive outcomes resulted from this travel.

From the tone of the discussion at Beltwide, it was evident that Australia is leading the world cotton industry with respect to environmental sustainability. There was very little discussion of environmental issues at Beltwide, although it was obvious that such issues will be important for the future of American cotton production. For example, there was discussion regarding the impact of the new Clean Water Acts for parts of the United States and also comment that the state of California aims to be a GMO free. Both factors will have large impact on the current cotton production systems in America.

The major finding made when visiting at the USEPA was that the focus of risk assessment and subsequent registration of chemicals has shifted. Rather than focusing on unknowns and potential threat from data gaps, as in the past, the EPA now suggests risk assessments be based upon good experimental data. This replaces heavy reliance on modelled data that often overestimated actual risk, resulting in over-conservative actions. This paradigm shift at the USEPA is the potential future for Australian registration and selection processes. Such changes in Australia will place more emphasis on finding a sustainable balance between industry and the environment.

Thirdly, at the University of Guelph, through interaction with Drs Keith Solomon and Ron Harris and their colleagues, new approaches to the risk assessment and associated knowledge were researched. The visit enabled interaction regarding the current CRDC research projects whilst expanding the skills and capabilities of Dr Crossan. Confirmation was also obtained for the validity of our current approach to risk assessment and the plans for future research. Excellent discussions were held with Dr Harris regarding the trends in pesticide use and other environmental aspects of the Australian cotton industry. It was especially rewarding to hear Dr Harris's specialist knowledge and insight to the Australian Cotton industry. Thus, good links with the main sources of Canadian environmental expertise regarding agrochemicals were strengthened as a result of this travel.

#### **b) other highlights**

The travel was planned to obtain inputs of the best features of risk assessment research in North America. The skills of Dr Crossan, developed by his work within the Australian cotton industry were thoroughly tested whilst researching in Guelph. Dr Solomon called on the knowledge and skills of Dr Crossan in a Tier 2 risk assessment for the Organisation

of American States regarding the pesticides used for the illicit production of cocaine and heroin in Columbia. The resulting affirmation that our risk methods and practical approach to research is world class was a highlight exceeding expectations.

**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.)**

2005 Beltwide Cotton Conference, January 4<sup>th</sup>-7<sup>th</sup>, New Orleans, USA (To participate and present paper entitled, “The environmental benefits of Roundup ready cotton)

Dr Peter W. Preuss, Ph.D., Director and colleagues  
National Center for Environmental Assessment, Office of Research and Development  
United States Environmental Protection Agency, Washington, DC, USA (Half day discussing the future of risk assessment research for the EPA. Half day; discussion of the current interaction of risk assessment science and politics. The struggle for environmental improvement was discussed with respect to the local “state of war”. )

Dr Hans Sanderson. Director of Environmental Safety (and risk assessment expert)  
Soaps and Detergents Association, Technical and International Affairs,  
Washington, DC 20005 (Half day; discussion of new methods of risk assessment. Hans has recently taken this position at SDA and is still actively researching improved methods of assessing the fit of chemicals, industry requirements and ecosystem protection.)

Dr Keith Solomon. Professor, The University of Guelph Centre for Toxicology and Department of Environmental Biology. (One month scientific exchange visit, interacting with the Guelph research group, discussing risk assessment of pesticides and assisting in projects related to the Work conducted for the CRDC at the University of Sydney. This was a very valuable experience.

Dr Ron Harris. Professor The University of Guelph Centre for Toxicology and Department of Environmental Biology. Whilst in Guelph, discussions regarding the environmental changes within the cotton industry took place. Dr Harris assisted with our most recent project application, highlighting the areas needed for publication and refinement. This was a valuable contribution because of Dr Harris’ knowledge of the Australian cotton industry.

**4. a) Are there any potential areas worth following up as a result of the travel?**

The risk assessment knowledge will be used in all our future research. A good confirmation of our approach for selecting safer pesticides was gained. New approaches to statistical consideration will be followed as well as the introduction of more probabilistic based approaches for risk management.

**b) Any relevance or possible impact on the Australian Cotton Industry?**

The impact on the cotton industry is expected to be positive. Confirmation of the vast changes in pesticides use can be made, backed by accepted international approaches of risk assessment. Also, there is indication that in future new pesticides can be designed and registered based more upon their intended use patterns rather than a worst case risk assumption. This could provide the format for better agronomy and better management of pesticides within the environment, albeit with continuing changes in pests and technology.

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

A brief report of Beltwide 2005 was submitted for a joint publication in The Australian Cotton Grower. Our future research and publications will incorporate the new knowledge gained from this study visit.