FINAL REPORT 2014
For Public Release

Part 1 - Summary Details
Please use your TAB key to complete Parts 1 & 2.

CRDC ID: US1401

Project Title: Cotton Industry injury and safety profile
Project Start Date: 1/11/13  Project Completion Date: 31/10/14
Research Program: Human Capacity

Part 2 – Contact Details

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Date submitted: 28/10/14
**Part 3 – Final Report**

(The points below are to be used as a guideline when completing your final report.)

**Background**

1. **Outline the background to the project.**

To maximise improvements in work health and safety, it is vital to have the best available evidence available to understand the risks that exist. In turn, this can help to define the best control solutions to reduce these risks and prevent injury. For the cotton sector, such information can be used with confidence by cotton growers to update and modify myBMP (Best Management Practices) information and enhance their health and safety systems/practices.

**Objectives**

2. **List the project objectives and the extent to which these have been achieved.**

The aim of this review is to:

(a) ensure that the most current and complete data possible is made available so that any priorities for and/or actions to improve health and safety, can be based on the most comprehensive evidence

(b) provide a framework for a sustainable model of data compilation and distribution to growers.

**Methods**

3. **Detail the methodology and justify the methodology used. Include any discoveries in methods that may benefit other related research.**

Several data sources have been used to determine the impacts of injury on the cotton sector including coronial, workers compensation and injury self-report data. Economic costs associated with the coronial and workers compensation data are also presented.

**Results**

4. **Detail and discuss the results for each objective including the statistical analysis of results.**

There were a total of nine deaths identified as definitely occurring within cotton production in the timeframe 2001 - 2013. The mechanism of the nine cases involved the following:- aeroplane, cotton picker, dam drowning (child), farm ute, forklift, module builder (x2), plant (nec) and irrigation pump.

Workers Compensation data for the period 2008-09 to 2011-12 illustrate that there are approximately 30 short term injury claims (0-4 days) and 35 serious claims (5+ days) per year. Time off work and the related costs indicate that almost 2,100 weeks of work time were compensated in the cotton sector costing over $5 million (approximately 500 weeks / year). This compared to 182,000 weeks across all Australian Agriculture, costing $296 million. The relevant proportion of all agricultural time lost and related compensation costs within the cotton sector, represented approximately 1.2% of all time lost and 1.7% of costs in Australian agriculture. This compares to approximately 7% of the value of agricultural exports in 2012-13. The median time (weeks) off for injuries in the cotton sector was less than half that of all agriculture. Similarly, the median cost of all injuries was around $2,150 in the cotton sector, compared to $7,100 for all Australian Agriculture.

A series of workshops were conducted with growers across all growing areas throughout the last six months of 2013 and early 2014, with over 100 participants providing feedback. A large number of known serious injuries or near miss incidents were recorded:- multiple respondents reported picker and module fires, falls from pickers and module builders plus quad-related incidents. Vehicles, plant, electricity and workshop incidents were also apparent. Only one-quarter of respondents reported no serious incidents.
Outcomes

5. Describe how the project’s outputs will contribute to the planned outcomes identified in the project application. Describe the planned outcomes achieved to date.

Information from the study have already been integrated into the myBMP platform in recent upgrades. The relative consistency of agents across all three levels of data - fatality, workers compensation and self-report, also provides a strong and valid framework to focus attention on these issues. Subsequent work involving the dissemination of this information (including that on associated costs to the sector), will seek to sharpen the focus on key issues that need to be addressed to reduce the injury burden.

6. Please describe any:-
   a) technical advances achieved (eg commercially significant developments, patents applied for or granted licenses, etc.);
   b) other information developed from research (eg discoveries in methodology, equipment design, etc.); and
   c) required changes to the Intellectual Property register.

The difficulty in tracking and identifying fatalities directly within the sector could be improved through better industry coding by coroners. The Centre will formally raise this issue through the National Coroners Information System (as per recommendation 5).

Conclusion

7. Provide an assessment of the likely impact of the results and conclusions of the research project for the cotton industry. What are the take home messages?

While the industry has made significant progress in addressing WHS, there continues to be room for improvement that will not only minimise the burden of injury and costs to cotton growers, but will also significantly reduce the devastating impacts that these incidents can have on individuals, their families and whole communities. Continued diligence and effective use of the injury data to guide improved practices, will be pivotal to facilitating this progression to safer workplaces for all in the cotton sector.

Extension Opportunities

8. Detail a plan for the activities or other steps that may be taken:
   (a) to further develop or to exploit the project technology.
   (b) for the future presentation and dissemination of the project outcomes.
   (c) for future research.

As per the translation/adopton recommendations of the study, further actions should incorporate:

1. A one-page summary of the study findings is released to all growers.

2. More comprehensive and additional coverage of the data be placed in relevant cotton industry forums (Cotton Matters, Grower meetings etc) and progressed. These forums will also provide scope to attain feedback from those working in the industry. In particular, the identification of injuries (not all of which result in medical care) and near-miss events, can provide useful information to assist with targeting key WHS risks.

3. The Australian Centre for Agricultural Health and Safety provides the Module Lead for the Human Resources and Work Health and Safety Module, providing updated content, resources and contact for growers to help manage health and safety on their farms. Maintaining this relationship will enable myBMP to provide contemporary WHS support and advice to growers.

4. At least annual discussions with the myBMP team to ensure any new and/or emerging trends from the data are being identified and acted on.
9. **A. List the publications arising from the research project and/or a publication plan.**  
   *(NB: Where possible, please provide a copy of any publication/s)*

The final report is attached. In addition we will formally work through the CRDC and Cotton Australia to ensure that coverage of the results is widely disseminated (subject to final sign off on the report by CRDC).

**B. Have you developed any online resources and what is the website address?**

We will continue to work with the myBMP team to incorporate/update information in a timely manner.
Part 4 – Final Report Executive Summary

The aim was to ensure that the most current and complete data possible is made available so that any priorities and actions to improve health and safety, can be based on the most comprehensive evidence. Data used to determine the impacts of injury on the cotton sector included coronial, workers compensation and injury self-report data.

Nine cotton-related deaths occurred in the period 2001 - 2013. Cases involved the following:- aeroplane, cotton picker, dam drowning (child), farm ute, forklift, module builder (x2), plant (nec) and irrigation pump. A further 28 cases could have involved the cotton sector, however data limitations meant that these could not be confirmed. The estimated direct economic impact of the nine cases was $25.8 million, with an average of $2.87 million (expressed in 2012 dollars).

Workers compensation data for the period 2008-09 to 2011-12 illustrate that there are approximately 30 short term injury claims (0-4 days) and 35 serious claims (5+ days) per year. For the more debilitating and serious injuries (5+ days), sprains and strains, fractures, open wounds and contusions were most common. Common factors in the serious claims (5+ days) were - falls from height, muscular stress (lifting), muscular stress (not carrying), hitting stationary objects, being hit by moving objects, vehicles and falls on same level. Time off work and the related costs indicate that almost 2,100 weeks of work time were compensated costing over $5 million (approximately 500 weeks / year). The median time (weeks) off for injuries was less than half that of all agriculture. Similarly, the median cost of all injuries was around $2,150 in the cotton sector, compared to $7,100 for all Australian Agriculture. Injury rates suggested that the cotton sector has a slightly higher rate of weeks lost per 1,000 workers (387) than that for all Australian Agriculture (310).

A large number of known serious injuries or near miss incidents were recorded:- multiple respondents reported picker and module fires, plus quad-related incidents. Vehicles, plant, electricity and workshop incidents were also apparent. Only one-quarter of respondents reported no serious incidents.

The information has been used to update and modify myBMP information so that growers can enhance their health and safety systems/practices. It will also allow a major focus on key risks for the industry and how these can be effectively controlled.

While the industry has made significant progress in addressing WHS, there continues to be room for improvement that will not only minimise the burden of injury and costs to cotton growers, but will also significantly reduce the devastating impacts that these incidents can have on individuals, their families and whole communities. Continued diligence and effective use of the injury data to guide improved practices, will be pivotal to facilitating this progression to safer workplaces for all in the cotton sector.

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