



# FINAL REPORT 2016

For Public Release

## ***Part 1 - Summary Details***

---

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

**CRDC Project Number:** US1501

---

**Project Title:** Smart technology for best practice WHS by  
cotton growers

---

**Project Commencement Date:** 1/7/14      **Project Completion Date:** 30/4/16

**CRDC Research Program:** 4 People

## ***Part 2 – Contact Details***

---

<b>Administrator:</b>	Jane Zhang
<b>Organisation:</b>	University of Sydney
<b>Postal Address:</b>	Level 6 Jane Foss Russel Building University of Sydney
<b>Ph:</b> 8627 8103	<b>Fax:</b> <b>E-mail:</b> jane.zhang@sydney.edu.au
<b>Principal Researcher:</b>	Tony Lower
<b>Organisation:</b>	University of Sydney
<b>Postal Address:</b>	PO BOX 256 Moree NSW 2400
<b>Ph:</b> 6752 8210	<b>Fax:</b> <b>E-mail:</b> tony.lower@sydney.edu.au
<b>Supervisor:</b>	John Temperley
<b>Organisation:</b>	University of Sydney
<b>Postal Address:</b>	PO BOX 256 Moree NSW 2400
<b>Ph:</b> 6752 8210	<b>Fax:</b> <b>E-mail:</b> john.temperley@sydney.edu.au

---

**Signature of Research Provider Representative:** \_\_\_\_\_

**Date Submitted:** \_\_\_\_\_

## ***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.**

The cotton sector is a leader in farm WHS because growers have used evidence-based information to develop practical and effective systems to manage WHS. In some instances WHS can be complex due to conflicting interpretation of WHS standards e.g. advice on practical machinery guarding, bunding for diesel tanks, access to distribution tanks/ irrigation gates etc. This leads to less than optimal uptake and compliance by growers. It is widely accepted that for increased adoption of safety practices to occur, WHS systems need to be convenient, result in cost efficiencies and assist with meeting compliance and legislation requirements.

There is also a requirement to ensure that all workers are competent to undertake the tasks required, with a safety induction being critical to assist in this process. Consequently, enhancing the ease with which contractors can be inducted will assist growers.

With the increasing uptake of smart phone and tablet computer technologies by growers, this provides an opportunity to develop alternate approaches that may further streamline the process to improve WHS.

### ***Objectives***

#### **2. List the project objectives and the extent to which these have been achieved, with reference to the Milestones and Performance indicators.**

The objective is to develop a WHS app for use by growers that:

- (a) assists in improving the control of known major hazards in the industry;
- (b) further streamlines WHS reporting processes for growers including worker induction
- (c) meets best practice standards for hazard control in the industry and links to myBMP accreditation

#### Indicator relevant to above:

1.3 - Advisory Group review and approve hazards to be incorporated into app (completed)

1.4 - Mobile website for cotton specific induction available (completed)

2.1 - YouTube information is electronically uploaded through an automated system into the personal storage facility within each growers myBMP account (completed).

3.1 - YouTube content available for public use (being finalised).

## *Methods*

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

A small Advisory Group overseeing the currently funded Managing Cotton Production Safety Program is already in existence and to optimise efficiency of grower inputs from a time and integration perspective with myBMP, it is proposed that this group would also provide oversight on this activity.

Issues of concern identified by the Advisory Group and informed by the data and grower statements, underpinned the selection of the topics to be addressed in the YouTube clips. The production of the clips and the mobile web site were based on these issues.

## *Results*

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

*Obj 1 - Assists in improving the control of known major hazards in the industry*

The YouTube clips and induction resource focus on major issues of importance for the sector and provide easily usable materials to facilitate use by growers.

*Obj 2 - Further streamlines WHS reporting processes for growers*

The mobile website (app) will provide direct upload of all documentation from workers and contractors into an electronic format that is easily transferable into the growers myBMP account. This significantly enhances and simplifies the record keeping process for growers.

*Obj 3 - Meets best practice standards for hazard control in the industry and links to myBMP accreditation*

The materials that have been developed have been recently showcased as international best practice in agriculture by the Australian Human Rights Commission, Australian Centre for Corporate Social Responsibility and the United Nations (UN) Global Compact Network Australia (Dec 2015).

## *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.**

There is already a substantial quantity of high quality and up to date evidence available on WHS issues in the industry that has been developed as part of the aforementioned program (Managing Cotton Production Safety Program). This work will form the basis of information to be included in the YouTube clips, so as to both visually and in text provide clear advice on best practice WHS hazard control. Currently, this information is often difficult to locate and access at the time when it is most needed – that is when physically in the field examining crops. Having visual examples on this mobile website (app) will also enable quicker recognition of control solutions and provide clear guidance (e.g. what are the components a grower must comply with in storing diesel on farm, confined spaces etc). The YouTube clips will be initially made available in the public domain and advertised to growers. As the

myBMP platform develops, these links will be directly incorporated into the evolving system.

The development of the cotton specific worker induction utilising a mobile website (app) was also done with the group working on myBMP. This ensured no duplication and also a seamless integration with the myBMP platform.

The planned outcomes were to develop these resources. We will continue to work closely with the CRDC and Cotton Australia to roll these developments out to facilitate access and utilisation by growers.

**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.**

N/A

***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?**

The key message is that resources are available to simplify and assist growers in adopting higher levels of WHS activity. Importantly these are also linked where feasible into the myBMP structure for ease of use as a one-stop shop.

***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.**

We are in discussion with the CRDC regarding linkage to grower events and promotion of the resources. These will be developed and consolidated to maximise exposure of the information.

**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)**

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

The YouTube clips are awaiting final approval from CRDC but will be available via the CRDC, Cotton Australia, myBMP, Farmsafe Australia and Australian Centre for Agricultural Health and Safety site.

The home sites on YouTube are:

Confined Spaces

Fuel Storage

Machinery Guarding  
Worker Safety Inductions  
Workshops

The induction materials are being hosted on: <http://induction.farmsafe.org.au/>

## ***Part 4 – Final Report Executive Summary***

---

The Australian cotton sector is a leader in work health and safety (WHS). The current project sought to further strengthen this position by developing safety critical resources for growers that take advantage of the increasing uptake of smart phone and tablet computer technologies.

There were two components to the project: (a) development of assistive YouTube safety clips on sentinel issues within the industry (irrigation pump safety including confined spaces, fuel storage, machinery guarding, worker safety inductions and workshop safety); and, (b) development of a mobile website (functions as an app) to assist with safety induction for new workers and contractors.

To ensure linkage with the existing myBMP platform, all aspects have been integrated where practical. This will ensure that growers do not have to duplicate work e.g. the safety induction website allows copies of induction records to be electronically delivered in an automated format to both growers and workers, thereby decreasing record keeping complexities. The YouTube clips will also allow growers (and workers) to have ready access to information in the field in real-time if required e.g. what are the issues to address with confined spaces? YouTube clips will be available at a range of websites including CRDC, Cotton Australia, myBMP, Farmsafe Australia and the Australian Centre for Agricultural Health and Safety site.

The worker safety induction mobile website (app), also has additional capacities above and beyond that of simply inducting workers. This includes the ability to customise items included within the induction to suit your farm (see the “Employer Mode” on the app). A link exclusive to your property is then developed and can be forwarded to workers and contractors for completion. If you wish to modify this link at some stage, simply go back into “Employer Mode” and make a new form applicable to your farm. This will then re-generate a new link which you can use with workers and contractors.

A second element to the mobile website (app), is the capacity for assisting in inducting contractors. This provides a range of options which you can also manipulate to suit your farm and the type of contract work that is being engaged. Recognising the limits to mobile coverage in many rural locations – the site will also allow a user who has previously loaded the site to use it while offline in browsers that support Offline applications. When back in an area with coverage, the information is then automatically uploaded. The mobile website is located at <http://induction.farmsafe.org.au/> .

Using these resources will reduce work-related incidents and increase the profitability of the cotton industry. For further details contact Mr John Temperley Australian Centre for Agricultural Health and Safety, Moree. Ph: (02) 6752 5074 or Email: john.temperley@sydney.edu.au