FINAL REPORT 2015

For Public Release

Part 1 - Summary Details

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

CRDC Project Number: CA1504

Project Title: Biosecurity training for growers and agronomists

Project Commencement Date: 29/6/2015  Project Completion Date: 1/9/2015

CRDC Research Program: 2 Industry

Part 2 – Contact Details

Administrator: Therese Wooden
Organisation: Cotton Australia
Postal Address: 4.01, 247 Coward St MASCOT 2020 NSW
Ph: 02 9669 5222  Fax: 02 9669 5511  E-mail: theresew@cotton.org.au

Principal Researcher: Nicola Cottee
Organisation: Cotton Australia
Postal Address: 4.01, 247 Coward St MASCOT 2020 NSW
Ph: 02 9669 5222  Fax: 02 9669 5511  E-mail: nicolac@cotton.org.au

Supervisor: (Name & position of senior scientist overseeing the project.)
Organisation:
Postal Address:
Ph:  
Fax:  
E-mail:  

Signature of Research Provider Representative: 

Date Submitted: 

Revised June 2015
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.

Within the national framework for biosecurity, all commonwealth and state governments and plant industries who are signatories to the Emergency Plant Pest Response Deed (EPPRD) formally commit to preparations that include; surveillance for key biosecurity risks, a chain of command for reporting suspected incursions, decision making processes for responding to confirmed incursions and industry recovery from confirmed incursions.

Cotton Australia is the cotton industry member of Plant Health Australia Ltd. and signatory to the Emergency Plant Pest Response Deed. The EPPRD specifically requires signatories to undertake information and awareness of EPPRD requirements with their members to demonstrate response preparedness. This can be reported in the signatory annual Biosecurity Statement (Schedule 15).

During the 2008-13 CRDC Strategic Plan, CRDC worked with industry and state governments to implement routine surveillance for exotic diseases and commence the development of contingency planning for specific, high risk exotic incursions for industry to implement if the situations eventuate. State governments have instigated 'biosecurity training' for their research staff to increase researcher awareness of processes for reporting and responding to suspected and confirmed incursions.

The industry needed to do the same, creating a network of human capacity at the grass roots of the industry - growers and their RDOs, consultants and Cotton Australia Regional Managers - that are aware of the role they may play in an incursion event. The thinking and decisions taken in the early stages of an incursion may be critical in determining the feasibility of an eradication response.

This project undertook to raise grower and consultant awareness and knowledge of the processes that will occur in the event that a cotton biosecurity incursion is confirmed.

Objectives

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

The project delivered against objectives of increasing the awareness and knowledge of plant biosecurity within the Southern Valleys cotton growing areas.

This project was specifically designed to address industry feedback given to Cotton Australia through previous biosecurity training, and through the Southern Valleys CGA regarding;

- A need to training growers and consultants in biosecurity risks and management
- A need to provide on-farm training, relevant to on-farm practices
- A need to upskill new growers, particularly in the Southern Valleys, on biosecurity risks and risk management for cotton growing operations.

Two Southern Valleys biosecurity training workshops were held to increase awareness of biosecurity threats. The training focused on the following topics;

- The Biosecurity Awareness session (overview of the EPPRD and PLANTPLAN)
- Role of industry and local decision makers
- On-farm general biosecurity awareness (Farm Biosecurity Manual)
- The defoliating verticillium wilt incident (September 2014-December 2015)

These workshops successfully delivered;
• Awareness of the Emergency Plant Pest Response Deed (EPPRD) and the related roles and responsibilities of all signatories
• Knowledge of high priority pests of cotton
• Knowledge of best management practice for farm biosecurity and location of cotton biosecurity information and resources
• Understanding of key industry contacts and reporting commitments under the EPPR Deed.

Initial plans to conduct a travelling roadshow for verticillium wilt did not come to fruition as CSD had already undertaken a similar exercise.

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

This project undertook to raise grower and consultant awareness and knowledge of cotton biosecurity risks the processes that will occur in the event that a cotton biosecurity incursion is confirmed.

Training workshops to achieve this was delivered to cotton growers in the Southern Valleys of NSW by researchers and biosecurity officers from NSW DPI and the Australian Department of Agriculture, September 2015. The agenda was as follows;

<table>
<thead>
<tr>
<th>Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item 1 Welcome</td>
</tr>
<tr>
<td>Honi Anderson, Cotton Australia</td>
</tr>
<tr>
<td>Item 2 How clean is clean?</td>
</tr>
<tr>
<td>Karen Kirkby, NSW DPI</td>
</tr>
<tr>
<td>Item 3 Farm biosecurity planner</td>
</tr>
<tr>
<td>Rachel Taylor, NSW DPI</td>
</tr>
<tr>
<td>Item 4 Machinery inspection</td>
</tr>
<tr>
<td>Jordon James, Department of Agriculture</td>
</tr>
<tr>
<td>Item 5 Exotic plant pests</td>
</tr>
<tr>
<td>Rebekah Niall, NSW DPI</td>
</tr>
<tr>
<td>Item 6 General discussion</td>
</tr>
<tr>
<td>Karen Kirkby, NSW DPI</td>
</tr>
<tr>
<td>Item 7 Workshop close &amp; further information</td>
</tr>
<tr>
<td>Nicola Cottee, Cotton Australia</td>
</tr>
</tbody>
</table>

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

Biosecurity awareness training was successfully delivered to 30 participants from key industry groups in September 2016. Participants included growers, farm workers, consultants and Cotton Australia Regional Managers.

Participants feedback indicated that the training;
• Met expectations
• Set the content at the right level
• Achieved a balance of presentation, discussion and activities
- Increased awareness of industry and governmental roles in emergency response situations. Specifically, participants found that the training was overall valuable and successfully;
  - Increased awareness of on-farm biosecurity risks
  - Conveyed the importance of biosecurity to agribusiness
  - Provided valuable resources in terms of printed content and biosecurity contacts
  - Highlighted the importance of farm hygiene
  - Provided an approach for assessment of biosecurity risk at a whole farm level

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.

The outcome of this training was increased awareness and knowledge of plant biosecurity in key areas within the cotton industry;
  - Awareness of the Emergency Plant Pest Response Deed (EPPRD) and the related roles and responsibilities of all signatories
  - Knowledge of high priority pests of cotton
  - Knowledge of best management practice for farm biosecurity and location of cotton biosecurity information and resources

This series of workshops successfully delivered biosecurity training that was;
  - Tailored to upskilling growers and consultants
  - Relevant to on-farm practices
  - Provided knowledge, understanding and contacts to established and new cotton growers

A key outcome of this initial industry training project may be the development of regional biosecurity engagement sessions in other cotton growing valleys.

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?

Participants generally considered the workshops to be of high value, highlighting practical solutions to minimise on-farm biosecurity risk. Undertaking these workshops did not result in sufficient preparedness for an emergency plant pest response however, it did increase anticipated farm hygiene, vigilance and prompt reaction to unusual symptoms.

Messages that resonated particularly well with participants included
  - The biosecurity risks contained in a single gram of soil
• Consideration of biosecurity risks from a whole-farm perspective (cotton, grains, fodder, 
  visiting consultants or relatives)
• Simple strategies to increase awareness of on-farm biosecurity risks (particularly for visitors)
• Simple strategies to minimise on-farm biosecurity risks (farm hygiene)
• Disease threats to the Southern Valleys
• Thoroughness of inspection for second hand machinery
• Simple biosecurity risk mitigation techniques may also protect a farm from incursions of 
  herbicide resistant weed species

A greater understanding of the Australian biosecurity continuum can highlight the relative strengths 
of the national risk assessment based approach to biosecurity. However, it also emphasises that on-
farm biosecurity is a critical safety-net for the national approach. Training participants are now 
aware that post-quarantine measures can be implemented effectively if irregularities are observed 
and correctly reported in a timely manner.

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.

Formal development and documentation of the suspected biosecurity incursion scenario approach, 
utilising various high priority plant pests of cotton would assist future delivery of biosecurity 
awareness training.

A key element of cotton biosecurity is whole farm biosecurity and the involvement of State agency 
personel. Inclusion of the grains industry biosecurity officers adds to the importance of an integrated 
approach to biosecurity at the farm level.

Cotton consultants are on-farm on a regular basis and are highly likely to be the first identifies or any 
unusual pests of cotton. Building knowledge of purposeful identification and reporting procedure in 
the agronomy and crop consultant sector is an important biosecurity risk mitigation strategy for the 
cotton industry.

National frameworks are currently being developed for handling incursions of exotic weeds. 
Inclusion of weed species in future biosecurity training activities, including herbicide resistant weeds 
may help growers and consultants to better better understand the importance of farm hygiene in 
managing biosecurity threats including insects, diseases, viruses, weeds and complexes.

A key outcome of this initial industry training project may be the development of regional 
biosecurity engagement sessions in other cotton growing valleys.

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?

   N/A

Part 4 – Final Report Executive Summary

Provide a one page Summary of your research that is not commercial in confidence, and that can be 
published on the World Wide Web. Explain the main outcomes of the research and provide contact
Within the national framework for biosecurity, all commonwealth and state governments and plant industries who are signatories to the Emergency Plant Pest Response Deed (EPPRD) formally commit to preparations that include; surveillance for key biosecurity risks, a chain of command for reporting suspected incursions, decision making processes for responding to confirmed incursions and industry recovery from confirmed incursions.

Post-quarantine management of biosecurity risks can greatly increase the resilience of agricultural industries. The cotton industry continues to create a network of human capacity at the grass roots of the industry – growers, farm workers, consultants and Cotton Australia Regional Managers - that are aware of biosecurity risks and the role they may play in an incursion event. The thinking and decisions taken in the early stages of an incursion may be critical in determining the feasibility of an eradication response.

This project undertook to raise the awareness and knowledge of grower, farm workers and consultants, of on-farm biosecurity risks and the processes that will occur in the event that a cotton biosecurity incursion is confirmed.

This project was specifically designed to address industry feedback given to Cotton Australia through previous biosecurity training, and through the Southern Valleys CGA regarding;

- A need to training growers and consultants in biosecurity risks and management
- A need to provide on-farm training, relevant to on-farm practices
- A need to upskill new growers, particularly in the Southern Valleys, on biosecurity risks and risk management for cotton growing operations.

Participants generally considered the workshops to be of high value, highlighting practical solutions to identify and minimise on-farm biosecurity risk. Overall outcomes from the training included;

- Highlighted the importance of on-farm activities to support national frameworks for biosecurity risk management
- Increased awareness of on-farm biosecurity risks
- Conveyed the importance of biosecurity to agribusiness
- Provided valuable resources in terms of printed content and biosecurity contacts
- Highlighted the importance of best management practice, particularly farm hygiene
- Provided an approach for assessment of biosecurity risk at a whole farm level

A key outcome of this initial industry training project may be the development of regional biosecurity engagement sessions in other cotton growing valleys.

Participants reiterated a need to reinvigorate the industry wide ‘come clean go clean’ campaign, using simple key messages that resonate well with growers, farm workers and consultants. Key messages that resonated particularly well with participants during this biosecurity training included;

- The potential biosecurity risks contained within a single gram of soil
- Consideration of biosecurity risks from a whole-farm perspective (cotton, grains, fodder, visiting consultants or relatives)
- Simple strategies to increase awareness of on-farm biosecurity risks (particularly for visitors)
- Simple strategies to minimise on-farm biosecurity risks (farm hygiene)
- Disease threats to the Southern Valleys
- Thoroughness of inspection for second hand machinery
- Simple biosecurity risk mitigation techniques may also protect a farm from incursions of herbicide resistant weed species