

Cotton industry biosecurity statement

July 2016

Introduction

Cotton Australia recognises the need for the cotton industry to work with the federal, state and territory governments to help reduce the potential for incursions of emergency plant pests that could adversely impact on production, domestic and international trade and the regional economy and environment.

The cotton industry is committed to ensuring effective responses to pest incursions are possible to minimise costs to growers, the industry, other plant industries, government parties and the wider community.

The cotton industry through Cotton Australia is working with Plant Health Australia (PHA) to develop a comprehensive national approach to managing biosecurity risks in the cotton industry. Valuable assistance is received from researchers and staff from CSIRO, NSW Department of Primary Industries (NSW DPI), Queensland Department of Agriculture and Fisheries (DAF), Biosecurity Queensland, Cotton Research and Development Corporation (CRDC), Cotton Seed Distributors (CSD), the Australian Government Department of Agriculture and Water Resources and, a number of Universities.

Commitments under the Emergency Plant Pest Response Deed

Cotton Industry Biosecurity Plan

The National Cotton Industry Biosecurity Plan, consistent with PHA's National Industry Biosecurity Planning Guidelines, was launched in November 2006 and reviewed in February 2010 (Version 2). In March 2015, CRDC funding was provided to Plant Health Australia Ltd to conduct a major review of the plan, which has been released as the Cotton Industry Biosecurity Plan Version 3.0 and is available on the Cotton Australia website.

The biosecurity plan identifies and prioritises the cotton industries biosecurity risks, and provides a framework for risk mitigation and preparedness activities. The awareness section identifies a range of existing industry processes, fact sheets and other sources of information for the identified 15 High Priority Pests (HPPs) that can be used to promote biosecurity awareness throughout the industry. The cotton Industry Biosecurity Group has been appointed to maintain currently of issues, identify biosecurity research and preparedness gaps, and provide oversight of industry implementation and adoption of biosecurity strategies as identified in the IBP. This group will next meet in October 2016 and thereafter, annually.

Pest categorisation

Cotton Australia will, as far as it is within its power to do so, ensure that appropriate industry technical experts will be available to participate in future meetings of the Categorisation Group to consider either pest categorisation or funding weight calculations for Emergency Plant Pests with multi-industry impacts. Cotton Australia has participated in all relevant categorisation group

meetings. Currently, seven cotton industry identified Emergency Plant Pests have been categorised and are listed in Schedule 13 of the Emergency Plant Pest Response Deed.

National decision-making processes

Cotton Australia will endeavour to ensure that senior and qualified industry delegates are available at short notice to participate in meetings of the Consultative Committee on Emergency Plant Pests or the National Management Group and to take up roles in Local Pest Control Centres or the State Pest Control Headquarters in the event of an incursion. Cotton Australia will also endeavour to ensure that all delegates participate in relevant competency and non-competency based training, which is being delivered through Plant Health Australia's Emergency Plant Pest Preparedness Training Program.

Owner Reimbursement Costs

In association with Plant Health Australia, Cotton Australia finalised a draft template for cotton Owner Reimbursement Cost (ORC) in June 2015. This template is currently undergoing finalisation and will be published following endorsement by the PHA Board and Relevant Parties to the Emergency Plant Pest Response Deed (EPPRD).

On-farm biosecurity

Best management practice program

The cotton Best Management Practices program (*myBMP*) is the core platform for delivery of best practice across the Australian Cotton Industry. The *myBMP* program includes a farm biosecurity module which was originally modelled on the '*Farm Biosecurity Manual for the Cotton Industry*'.

This module is designed to assist growers in protecting their farm from the introduction of endemic and exotic pests, and to help minimise the spread of pest species throughout the industry. Practices to create awareness of biosecurity risks and the process for reporting a suspected incursion are also outlined.

The biosecurity module for MyBMP was reviewed in 2015-2016 to; make the resources easier to use for growers; allow growers to meet all responsibilities under changed Commonwealth and State biosecurity legislation (including the General Biosecurity Obligation) and; provide better linkages to resources available on other websites including the AHA/PHA Farm Biosecurity website, and website for the industry's CottonInfo extension team.

Training

In 2014, CRDC provided funding for training organised by Cotton Australia with Department of Agriculture in Sydney to establish a grass-roots network of growers, Crop Consultants, Cotton Australia Regional Managers, CottonInfo extension officers that are aware of and understand the role they may be asked to play in an incursion event. A regional grower farm biosecurity workshop was held in collaboration with the grains biosecurity officers in Emerald in August 2014, and Griffith in September 2015.

Extension

The Australian Cotton Industry's CottonInfo team play a key role in the development and delivery of research extension resources. The CottonInfo team includes a biosecurity extension tech specialist to help coordinate industry biosecurity extension. CottonInfo has identified on farm biosecurity as a key campaign and are working with Cotton Australia to promote on-farm biosecurity, including good farm hygiene and wash down of equipment, promoted as 'Come Clean. Go Clean.'

Recommendations for best biosecurity practice, including details of cotton HPPs is published annually in the CottonInfo *Cotton Pest Management Guide*, which is delivered to every cotton grower and pest control advisor. A recent survey of growers found that 83% of respondents attributed some assistance in improving insects, weeds, diseases, resistance & biosecurity practices to CottonInfo.

Research and development

Enhanced cotton biosecurity R&D capacity

Cotton Australia is the [PIRD Act 1989] representative organisation for the cotton industry to the Cotton Research and Development Corporation (CRDC) and as such, has a strong role in advising industry priorities for the Corporation's R&D budget. Cotton Australia is committed to supporting proposed projects that enhance our industry's biosecurity expertise and response preparedness.

Capacity to respond to exotic pests is supported through the inclusion of biosecurity milestones for researchers monitoring and research of endemic pests and diseases. Biosecurity research and diagnostic capacity for cotton have also been leveraged through a number of scientific exchanges. Recent enhancement of biosecurity capacity, capability and preparedness have been delivered by a variety of research projects which notably includes:

- CRDC funding to support annual disease surveys conducted in partnership with NSW DPI and DAF. These surveys provide proof of absence for HPP exotic diseases.
- CRDC funding to support UQ project, '*Viruses, vectors, and endosymbionts: Exploring interactions for control*'. This project examines the capacity of the SLW populations in Australian cotton to potentially transmit viruses that cause Cotton leaf curl disease (CLCuD), including travel to and collaboration with the Bill and Melinda Gates, funded African Cassava Whitefly Project (ACWP) at The University of Greenwich (UG). Another component of this work is focused on examining the relationship that SLW shares with symbiotic bacteria (endosymbionts) that are harboured within the insect's body and cells. Clarifying the influence that these endosymbionts have on the biology of SLW may reveal opportunities for new pest management approaches. This project has also provided important diagnostic capacity for both virus and whitefly, identifying new virus and whitefly species in Australia. These diagnostics have included samples from commodities other than cotton.
- The Ph.D., '*Multiple host use, and gene-flow in green vegetable bug relative to cotton crop*' has identified that there have been multiple historical incursions of green vegetable bug. This has been communicated to NAQS.

Pest Surveillance

Numerous pest surveys and crop monitoring activities are undertaken each season by cotton industry and State government researchers. Formal alignment of monitoring protocols for high priority exotic pests by all researchers now enables the collection widespread surveillance data throughout NSW and Queensland annually during routine benchmarking of endemic diseases (NSW DPI and DAF early and late season disease surveys). Viral surveys of major commercial areas and Northern Australia are conducted annually as part of the project '*Surveillance and studies for endemic and exotic virus diseases of cotton*', led by Dr. Murray Sharman.

Through the CRDC funded project, '*Surveillance for exotic cotton viruses: Multiple targets in and nearby Australia*' the industry is forging stronger connectivity between the cotton industry and surveillance activities in northern Australia by Northern Australian Quarantine Strategy (NAQS, Department of Agriculture and Water Resources). This means that the industry can access relevant information earlier, and be better prepared to respond to changing threats. This engagement has helped to build NAQS virology capacity. This project is also responsible for delivering a contingency plan for cotton leaf curl virus, which is seen as a significant threat to Australian cotton. A structured surveillance system for exotic cotton viruses both pre and post border will be recommended as part of this project.

Most cotton growers employ consulting agronomists who generally conduct twice weekly crop inspections for pests. In a survey of these consultants, 40 respondents reported spending significant 1558 hours on biosecurity, including cleaning down of vehicles and equipment, investigating/reporting unusual pest/plant symptoms and completing training/farm inductions.

The reporting and confirmation of the Reniform nematode in Central Queensland highlights the successful linkage between consultant monitoring and linkage to researchers and industry. Extensive monitoring by DAF, with funding from CRDC, has confirmed an overall trend of increasing Reniform populations commonly associated with back to back cotton. Growers have reported up to 40% yield loss from Reniform nematodes in these back to back situations. Research into agronomic and crop rotation management options is ongoing.