Plant biosecurity in Australia – a powerful government–industry partnership

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Abstract

The ability of governments and industries to work together and share responsibility for designing and managing the plant biosecurity system in Australia has been a crucial development over the last 15 years. Plant Health Australia (PHA) was established in 2000 as a not-for-profit company to breathe life into this partnership and support its strengthening and expansion over time. The model's success has enabled a wide range of nationally significant challenges to be addressed and agreements to be put in place to deliver improved biosecurity outcomes. While the partnership continues to evolve there are lessons to be drawn from the experience of Australia and the potential for transfer of the approach to other countries.

PHA, as the national coordinating body for plant biosecurity in Australia, services the needs of its government and industry members and acts as an independent advocate for the national plant biosecurity system. The company's efforts help minimise new plant pest impacts, enhance Australia's plant biosecurity status, assist trade and market access for Australia's plant products, safeguard the livelihood of producers, support the sustainability and profitability of plant industries and the communities that rely upon them, and preserve environmental health and amenity.

Key words

Plant, biosecurity, Australia, government, industry, partnership, national

Introduction

Australia, in plant biosecurity terms, is the lucky country. Natural geographic isolation and a strong focus on biosecurity have ensured that Australia remains free from many plant pests that adversely affect agriculture, horticulture and forestry in other parts of the world.

To prevent exotic plant pests (including insects, mites, snails, nematodes, diseases and weeds) from entering, establishing and spreading in Australia, the biosecurity system incorporates a range of measures across a continuum — before, at and after the border (See Figure 1).

Biosecurity is defined as measures that protect farms, industries and the natural environment from the negative impacts of plant pests.

Plant Health Australia (PHA) is a not-for-profit company set up to provide support services to Members across the biosecurity continuum, but particularly in the post-border setting. The company structure is a unique industry-government partnership model, which has considerable advantages in providing protection for Australia's plant industries.

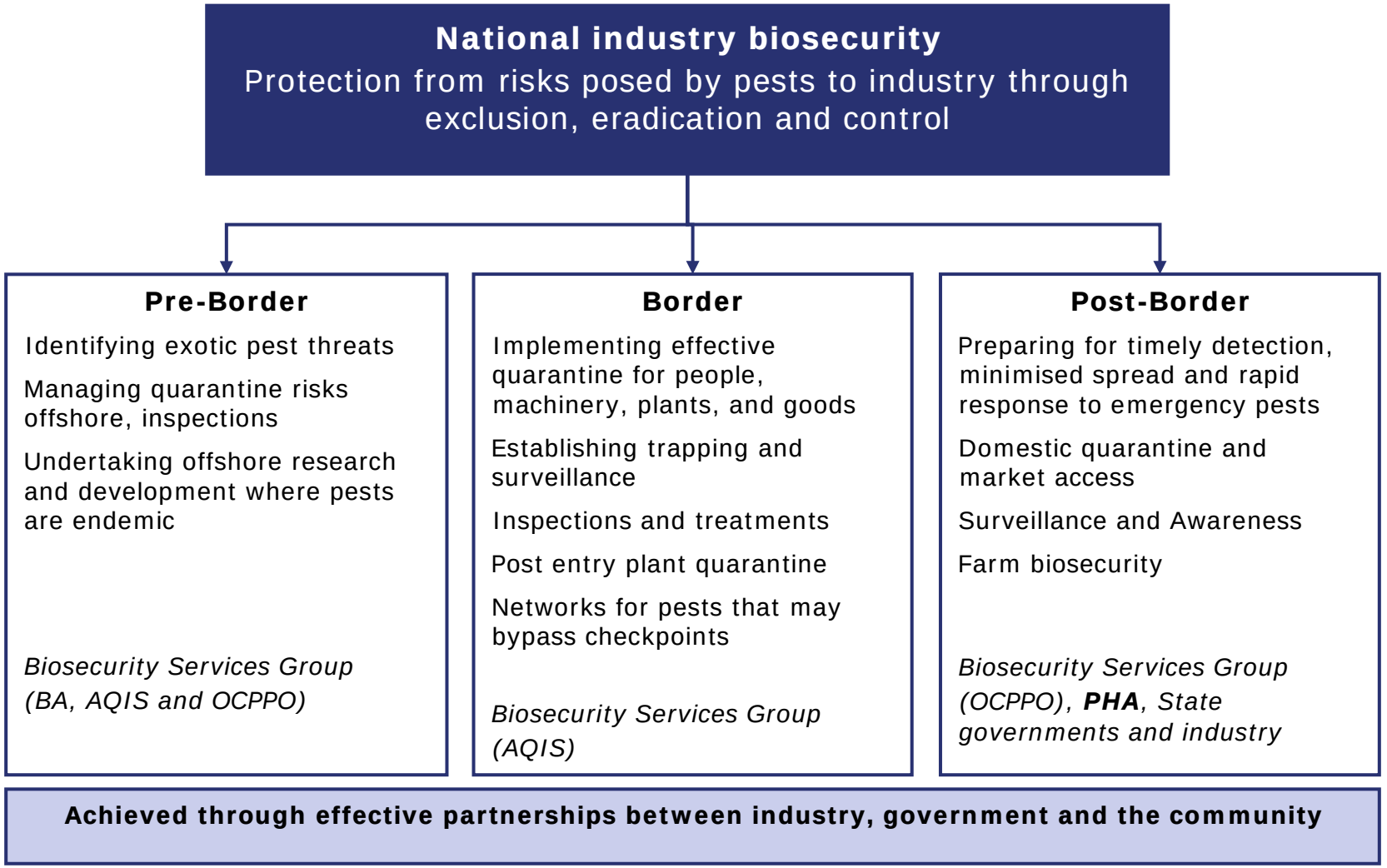

Figure 1. The biosecurity continuum in Australia

PHA and the plant biosecurity system

With 60,000 km of coastline and hundreds of serious exotic plant pests to consider, protecting Australia's plant industries is no small task. Among the myriad of challenges, there is an ever increasing and more rapid movement of people and produce across state and national borders as evidenced by the 13 million air passengers, 1.7 million containers of cargo and 150 million mail items that arrive in Australia each year (Australian Quarantine Inspection Service, 2007).

While Australia has a world class quarantine system that manages and undertakes the risk assessment, inspection and analysis of these people, cargo and items, there is no such thing as zero risk and the establishment of exotic plant pests in production systems or the environment can have significant consequences.

There is much to protect. Australia has a plant production system worth $25 billion annually including agriculture, horticulture and forestry (Australian Bureau of Statistics, 2010) (Australian Bureau of Agricultural and Resource Economics, 2009). More than half of this produce is exported reflecting the strong reliance Australia's plant production industries have on access to international markets.

Plant production not only supports the livelihoods and investments of individual producers, it also protects consumers in domestic and export markets by maintaining the integrity, quality and sustainability of Australia's food supply. Many rural communities in Australia rely on farming for their viability. Australia also has a unique natural environment to protect.

PHA was registered in April 2000 as a not-for-profit company limited by guarantee under Corporations Law. PHA is comprised of 47 members including the Australian Government, all state and territory governments, plant industry organisations (including Avocados Australia) and a range of industry, research and professional services organisations (Table 1).

This government-industry partnership model has been established to improve the management of new plant pest incursions and provides a forum for shared decision making as well as the potential for sharing costs.

Australia is unique in having this model and, while the significance of this arrangement is not well understood across the general population, it has proved to be highly effective. It has successfully operated as the foundation for sharing responsibility for plant biosecurity in Australia, and has attracted international interest since its inception.

The notion of governments and industries sharing responsibility for biosecurity was a cornerstone of a federal government review into Australia's animal and plant quarantine policies and programs in 1996 — *Australian Quarantine: a shared responsibility* (Nairn, Allen, Inglis, and Tanner, 1996).

Findings of the more recent Australian Government review of Australian Quarantine and Biosecurity, the Beale Review in 2008, reinforced the primacy of the framework of shared responsibility and confirmed the significant public good in maintaining a world-class national biosecurity system (Beal, Fairbrother, Inglis and Trebeck, 2008).

The plant biosecurity partnership between government and industry means that responsibilities for maintaining the integrity and performance of the plant biosecurity system are shared. The partnership model recognises that plant producers and the wider Australia community are beneficiaries of better biosecurity outcomes such as improved productivity, product quality, market access, sustainability and environment preservation.

Table 1: Plant Health Australia's Members as at 30 June 2011

Member type	Member
Government	Australian Government Australian Capital Territory Government New South Wales Government Northern Territory Government Queensland Government South Australian Government Tasmanian Government Victorian Government Western Australian Government
Industry	Apple and Pear Australia Almond Board of Australia Australian Banana Growers' Council Australian Plantation Products and Paper Australian Honey Bee Industry Council Australian Lychee Growers' Association Australian Macadamia Society Australian Mango Industry Association Australian Olive Association Australian Processing Tomato Research Council Australian Table Grape Association Australian Walnut Industry Association AUSVEG Avocados Australia CANEGROWERS Canned Fruit Industry Council Cherry Growers Australia Citrus Australia Cotton Australia Dried Fruits Australia Grain Producers Australia GROWCOM Nursery and Garden Industry Australia Onions Australia Passionfruit Australia Incorporated Pistachio Growers Association Incorporated Ricegrowers' Association of Australia Strawberries Australia Summerfruit Australia Wine Grape Growers' Australia
Associate	Australasian Plant Pathology Society BSES Cotton Research and Development Corporation Cooperative Research Centre for National Plant Biosecurity CSIRO Grains Research and Development Corporation Horticulture Australia New Rural Industries Australia

The Emergency Plant Pest Response Deed

In 2005, with ratification of the *Emergency Plant Pest Response Deed* (EPPRD), governments and industries reached agreement to formally share responsibility for decision making and costs in relation to Emergency Plant Pest (EPP) eradication responses.

The EPPRD is a formal, legally binding agreement between PHA, the Australian Government, all state and territory governments and national plant industry representative body signatories. The EPPRD covers the management and funding of responses to EPP incidents, including the potential for Owner Reimbursement Costs for producers. It also formalises the role plant production industries play in decision making as well as their contribution towards the costs related to EPP responses.

The most substantial benefit of the EPPRD is preparedness — arrangements and agreements are in place to allow fast and effective responses to EPP incidents, while minimising the uncertainty over management and funding. It also ensures that EPP incursions are managed in a consistent and nationally agreed way with inbuilt accountability and transparency, and that funding mechanisms are agreed in advance.

Under the agreement, government and industry Parties share the costs of the approved Response Plan based on the EPPs potential impacts on:

- public health
- environment or amenity values
- regional and national economies
- trade and market access
- control or production costs.

The funding ratio varies depending on how the pest is categorised. A Category 1 pest, which is considered to have mostly public impact, is funded completely by government, while a Category 4 pest is considered to have mostly private impact and is funded by a 20% government: 80% industry ratio, and there are two other cost-sharing Categories in between.

For growers, a key benefit of the Deed is the provision for reimbursement of certain direct costs that owners can incur when their crops are damaged or destroyed as a result of implementing an approved Response Plan.

Risk mitigation and preparedness

Importantly, the EPPRD also obligates all Parties to undertake risk mitigation through the development and implementation of biosecurity strategies and programs, reducing the risk of an EPP incursion in Australia. Being forewarned and hence better prepared is forearmed.

An example of how PHA assists its Members to meet this obligation is the development of Industry Biosecurity Plans (IBPs). An IBP is an industry's blueprint for providing the best possible protection against new plant pests. The avocado industry in Australia first developed the *Industry Biosecurity Plan for the Avocado Industry* with PHA and Horticulture Australia Ltd in 2007 (Plant Health Australia, 2011a). This IBP has recently been reviewed and Version 2.0 will be released at this Congress. Revision of plans every 3-4 years is important. It ensures that biosecurity planning is based on the latest scientific information, providing the avocado industry with the best possible preparedness for new plant pests.

To develop an IBP, PHA brings together experts to assess the threats that could damage the industry's produce. After a comprehensive review, the plant pests of main concern are identified and risk mitigation practices that can be taken by governments, industry and the community are devised. Contingency plans and response management procedures are established, ready to be enacted should an Emergency Plant Pest incursion occur.

For the avocado industry, a range of High Priority Pests were identified, including Avocado thrips which are causing large economic losses in Californian avocado orchards, Avocado seed weevils which are a major pest in Central America, and Laurel wilt which is emerging as a significant pest of avocadoes in the US.

Clearly these are pests that it pays Australia to guard against. Biosecurity planning allows industry and government to focus efforts strategically, to protect individual growers, the avocado industry, the rural communities that rely on avocado production, and perhaps the natural environment.

PHA and its industry members are also assisting growers at the farm level by translating the most important information from the IBP into a Biosecurity Manual for growers. These Manuals are plain language documents which contain images of key pest threats and the damage that they can cause so that producers are better able to undertake surveillance and, importantly, to report any suspect new pests.

The *Orchard Biosecurity Manual for the Avocado Industry* (Plant Health Australia, 2011b) has recently been completed by PHA, Avocados Australia and the Department or Employment, Economic Development and Innovation in Queensland. The manual identifies procedures that growers should implement on their farms, such as ensuring hygiene of people moving on and off a property, cleaning vehicles and equipment, and collecting all plant waste and disposing of it away from nursery and orchard areas and water sources. Everyone has a role to play in protecting Australia's plant industries – a message that PHA promulgates.

Building a Better Plant Biosecurity System

PHA also has a role boosting biosecurity at the national level. Each year the company produces the *National Plant Biosecurity Status Report* (Plant Health Australia 2011c). In addition to identifying the greatest exotic pest threats to plant production, each report covers the governance of plant biosecurity in Australia and explains the mechanisms, including our surveillance systems, which successfully manage the pest status of plant industries. Reports also describe the hundreds of innovative Australian research projects underway or completed over the period of the Report.

Status Reports are compiled by PHA with valued contributions, input and advice from Australia's key plant biosecurity stakeholders. It has become a vital reference source for anyone interested in Australia's plan biosecurity system and the ingredients behind Australia's success in minimising the incidence and impact of unwanted plant pests and optimisation of trade advantages.

In addition to monitoring plant biosecurity system performance, the unique partnership model of PHA enables the company to facilitate measures to maintain and strengthen the Australian plant biosecurity system. As a not-for-profit company with federal government, state and territory government, and industry Members, current and future needs of the plant biosecurity system can be mutually agreed, issues identified and solutions to problems found.

Earlier this year, PHA released a vision for improving Australia's plant biosecurity system at the national level — the *National Plant Biosecurity Strategy* (NPBS) (Plant Health Australia, 2010). More than three years in the making, the NPBS was finalised with endorsement of PHA's Members in December 2010. This document outlines the current state of the national plant biosecurity system, the many challenges that lie ahead, and sets out a range of steps that will need to be taken over the next ten years to overcome these challenges.

Development of the NPBS was coordinated by PHA with more than 200 stakeholders across government and industry lending their expertise to the project. Its central theme is a call for the broadening of partnership arrangements and improved national coordination and cooperation across the plant biosecurity system. In a climate of increasingly constrained funding for biosecurity, real and growing biosecurity threats, and mounting global concerns about food security, working under this new paradigm will be essential.

Conclusion

The government–industry partnership that PHA embodies has been highly successful in boosting Australia's plant biosecurity on-farm, and at industry and national levels. The central strategy has been to build a genuine partnership approach between industry and government — one that ensures that everyone can contribute to policy making and direction setting on major plant biosecurity issues.

The strength of the partnership has grown over time, enabling progress to be achieved in improving post-border biosecurity arrangements beyond emergency responses.

PHA has been able to plan for future challenges too. The *National Plant Biosecurity Strategy* provides a vision for Australia's plant biosecurity system for the next 10 years, a massive achievement only made possible by bringing together and achieving agreement between hundreds of stakeholders across government and industry.

Documents such as the *Industry Biosecurity Plan for the Avocado Industry* and the *Orchard Biosecurity Manual for the Avocado Industry* are important examples of work being undertaken by PHA, the avocado industry and the Australian and state and territory governments to mitigate the risk of establishment of new plant pests into Australia.

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