Post-Entry Plant Quarantine

A submission by Plant Health Australia on behalf of its plant industry Members

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Plant Health Australia

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Plant Health Australia (PHA) is the national coordinator of the government-industry partnership for plant biosecurity in Australia. As a not-for-profit company, PHA services the needs of Members and independently advocates on behalf of the national plant biosecurity system. PHA’s efforts help minimise plant pest impacts, enhance Australia’s plant health status, assist trade, 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.

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Table of Contents

Introduction .................................................................................. 5
Background ................................................................................... 6
Current requirements of Post-Entry Plant Quarantine by PHA Members ........................................................................................ 7
Importance of Post-Entry Plant Quarantine ................................... 9
Impact of plant pest incursions ................................................... 13
Expertise and facilities required for Post-Entry Plant Quarantine 14
Costs of Post-Entry Plant Quarantine ........................................... 16
Conclusions .................................................................................. 17
Introduction

This submission draws on PHA’s observations and experiences over the past ten years in managing plant health programs, contributing to the enhancement of the national plant health system and national response to recommendations from the 2008 Independent Review of Australia’s Quarantine and Biosecurity Arrangements – the Beale Review. In its preparation Plant Health Australia (PHA) has sought the views of its industry Members who are currently the main users of the existing post entry plant quarantine facilities operated by the Australian Government at Knoxfield and Eastern Creek. This submission has the full endorsement of the following industries:

- A3P
- Almond Board of Australia
- Australian Dried Fruit Association
- Australian Mango Industry Association
- Australian Table Grape Association
- AUSVEG
- Avocados Australia
- Cherry Growers’ of Australia Inc
- Citrus Australia Ltd
- Nursery and Garden Industry Australia
- Strawberries Australia
- Winemakers Federation of Australia

The issue of ongoing access to high security Post Entry Plant Quarantine (PEPQ) facilities is of great concern to all of PHA’s industry Members. Industries have received two briefings from the AQIS PEQ Review Group and have indicated at the PHA Plant Industry Forum that ongoing access to high security PEPQ, at an appropriate cost effective fee structure, and which does not push the balance towards smuggling, is a priority.

The scope of this submission covers the importance of Post Entry Plant Quarantine (PEPQ) to plant industries and strongly supports the continuation of Australian Government input into establishment, maintenance and operation of national PEPQ facilities. It recognises that plant industries have made contributions to the review through a number of User Requirements Workshops on matters relating primarily to design of a new PEPQ facility/s. With this in mind matters of detail surrounding such a new facility/s are not dealt with in this submission.
Background

The establishment of PHA in 2000 has seen significant achievements in creation of a genuine partnership approach to plant biosecurity between the Australian Government, State and Territory Governments and Australia’s plant industries. Working with government and industry, PHA (and its equivalent Animal Health Australia (AHA) for the animal industries) has built shared understanding and commitment to national plant biosecurity objectives and acted as an independent broker.

While PHA’s strategic and operational focus is on mitigating risks of post-border biosecurity breaches and reducing their impact through improving national response capability and preparedness, PHA and its Members recognise the critical role that the present two high-health post-entry quarantine facilities for plant material at Eastern Creek (Sydney) and Knoxfield (Melbourne) play in minimising the risk of entry of pests on imported plant material.

Overall, imported nursery stock is seen as the highest risk for the importation of exotic pests as the pests can be introduced in mother stock which is then used to propagate material for the whole industry. In addition if a pathway analysis is undertaken the highest likelihood of establishment occurs with imported propagating material.

The Knoxfield and Eastern Creek facilities provide industries with the ability to import new genetic material into Australia in a secure, efficient and cost effective manner. They allow for the development and release of improved high yielding, higher quality, pest resistant and better adapted crops for Australian plant industries. Costs for processing high risk material through PEPQ are borne largely by the importer with assistance from the Australian Government via the anti-smuggling subsidy. As well as delivering a benefit for industry, PEPQ makes a significant contribution to the public good by preserving the economic health of regions and communities, maintaining trading relationships and Australia’s biosecurity standing, and also safeguarding the availability and safety of Australia’s food supply.

The integrity of the national plant health system and the government-industry partnership in plant biosecurity relies on robust and effective Post Entry Plant Quarantine (PEPQ) arrangements. The Emergency Plant Pest Response Deed (EPPRD) confers an obligation on all government and plant industry signatories to mitigate risks posed by exotic plant pests. As custodians of the EPPRD, PHA promotes compliance and action by all signatories. Border quarantine, including Post-Entry Plant Quarantine (PEPQ) activity, is one of the primary means by which the Australian Government discharges its risk mitigation obligations as an EPPRD signatory. As conferred by the Australian Constitution, primary responsibility for border and pre-border quarantine and biosecurity rests with the Australian Government.

In reviewing the future of Australia’s post entry quarantine arrangements it may be tempting to reduce the rigour of PEPQ protocols, cut back on expertise within the Australian Government PEPQ stations, limit access to appropriate PEPQ facilities, increase costs of PEPQ to end-users, or extend waiting periods for
PEPQ. None of these steps, though, are in the interests of Australia’s plant industries or the broader community.

Consequences from such actions could range from stifling breeding innovation, heightened susceptibility of varieties to emerging pests and diseases and reduced competitiveness of Australian plant industries. Most seriously of all, dilution of Australian Government support for PEPQ would likely lead to an increase in illegal smuggling of plant material, significantly raising the risk of exotic plant pests being introduced into Australia. With the Australian tax payer likely to be footing a sizeable part of the bill for responses to exotic plant pest incursions, and importation being the primary pathway of entry, it is not in the interests of the Australian Government to reduce current levels of commitment to PEPQ. In fact, this submission argues that investment in PEPQ should increase as part of the Government’s response to recommendations of the Beale Review.

**Current requirements of Post-Entry Plant Quarantine by PHA Members**

For entry of high risk plant material into Australia, permits are required which outline the PEPQ treatments to mitigate the risk of contamination, infestation or infection with plant pests. These types of plants must undergo screening in government approved facilities due to the complexity of the screening procedures, the degree of skill required to propagate the indexing material and the skill to interpret the results. With particular regard to plant species covered by Members of Plant Health Australia, the following general PEPQ protocols and specified PEPQ locations are required:

* **Orange, lemon, mandarin, lime etc (Citrus spp.):** grown in quarantine at Eastern Creek for a minimum of 9 months however the citrus industry indicates that this realistically takes up to 18 months. Requires chemical treatments on arrival, heat therapy and shoot tip grafting *in vitro* and testing for several exotic and endemic pests. Citrus relatives require similar protocols.

* **Apple and pear (Malus and Pyrus spp.):** Budwood or dormant cuttings only, not more than 1 year old. Must be grown in quarantine at Eastern Creek and may require up to 24 months to complete 2 season’s worth of pathogen testing. Requires chemical treatments on arrival and testing for several pests over the 2 seasons.

* **Nectarines, peaches, plums, cherries, almonds etc (Prunus spp.):** Dormant budwood only, not more than 1-2 years old. Must be grown in quarantine at Eastern Creek or Knoxfield for a minimum of 2 years. Requires chemical treatments on arrival and testing for several pests over the 2 seasons.

* **Potatoes (Solanum spp.):** Must be grown in quarantine at Knoxfield or Kingston, Tasmania for a minimum of 6 months. Requires chemical treatments on arrival and testing for several pests.

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1 Import Conditions database (ICON), November 2010

* Protocols may require the production of large numbers of virus free rootstocks and grafting onto indicators to ensure all strains of the target viruses are effectively screened for.
*Strawberries* (*Fragaria* spp.): Tissue culture only, grown in quarantine at Knoxfield for a minimum of 18 months. Requires chemical treatments on arrival and testing for several pests.

*Clonal grasses* (*Zoysia* spp.): Nursery stock must be grown in quarantine at Eastern Creek. No specific time limit but all required disease testing must be carried out prior to release. Requires chemical treatments on arrival and testing for several pests.

*Grapevines* (*Vitis* spp.): Nursery stock must be grown in quarantine at Eastern Creek or Knoxfield for a minimum of 1 year with visual disease screening; followed by 1 year in the field with bacterial disease screening. Requires chemical treatments on arrival and testing for several pests.

Grains (*Triticum* spp. and legume species): All seed must be grown in a closed quarantine facility at either an Australian Government (AQIS) post-entry quarantine facility; or a quarantine approved post-entry quarantine facility (Class 6.1) operating under a Compliance Agreement with AQIS. Plants must be screened throughout growth plus a final inspection of the harvested seed. Seed requires chemical treatments on arrival and inspection for several pests.

*Bananas* (*Musa*): for nursery stock, only meristem cultures are permitted. Must be grown in quarantine at Eagle Farm or a quarantine approved tissue culture laboratory (Class 6.5) approved by AQIS for the purposes of multiplying *Musa* spp. tissue cultures. Requires chemical treatments on arrival and testing for several pests.

Mangoes (*Mangifera* spp.): Nursery stock must be grown at Knoxfield, Eastern Creek or Eagle Farm for a minimum of 9 months. Requires chemical treatments on arrival and testing for several pests.

*Avocados* (*Persea* spp.): Nursery stock must be grown at a government approved post-entry quarantine facility for a minimum of 24 months. Requires chemical treatments on arrival and testing for several pests.

Vegetables and ornamentals: For many of the vegetable industries and many species of the nursery and garden industry, imported seed or nursery stock are considered of medium or low risk. Medium risk material may be required to undergo PEPQ for a period of three months with visual inspection for pests and disease. While this therefore requires less intensive PEPQ, a need for access to suitable facilities and staff with sufficient expertise is still essential.

*Chestnuts, Walnuts, Pecans, Pistachios, Hazelnuts* (*Castanea* spp., *Juglans* spp., *Carya* spp., *Pistacia* spp., *Corylus* spp.): PEPQ of nursery stock of nut crops depends on the species being imported and the country of origin. Highest levels of PEPQ specify that material must be grown at Knoxfield, Eastern Creek or Kingston for up to 24 months. All material requires chemical treatments on arrival and testing for several pests.

**Forestry species (E.g. Eucalyptus, Pinus):** Nursery stock must be grown at a government approved post-entry quarantine facility for a minimum of 24 months. Requires chemical treatments on arrival and testing for several pests.
Importance of Post-Entry Plant Quarantine

With all sectors of the plant health community facing increasing production and sustainability challenges, and with increasing people and plant produce movement around the globe, the threat of plant pest and disease incursions is very real with potentially devastating effects on our $22.8 billion plant industries\(^2\). Figures for each of the industries listed in the previous section are provided in Table 1 (2006-2008 3 year average):

<table>
<thead>
<tr>
<th>Plant industry</th>
<th>Industry local value of production (2006-08 3 year average)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grains</td>
<td>$7.1 billion</td>
</tr>
<tr>
<td>Vegetables (includes potatoes and many imported vegetable seed lines)</td>
<td>$1.8 billion</td>
</tr>
<tr>
<td>Winegrapes</td>
<td>$1.2 billion</td>
</tr>
<tr>
<td>Plantation Log (Forest Gate)</td>
<td>$1.2 billion</td>
</tr>
<tr>
<td>Nursery and garden (includes clonal grasses and many imported nursery species)</td>
<td>$746 million</td>
</tr>
<tr>
<td>Apple and pear</td>
<td>$459 million</td>
</tr>
<tr>
<td>Bananas</td>
<td>$451 million</td>
</tr>
<tr>
<td>Citrus</td>
<td>$360 million</td>
</tr>
<tr>
<td>Summerfruit</td>
<td>$244 million</td>
</tr>
<tr>
<td>Table grapes</td>
<td>$185 million</td>
</tr>
<tr>
<td>Mangoes</td>
<td>$102 million</td>
</tr>
<tr>
<td>Avocados</td>
<td>$96 million</td>
</tr>
<tr>
<td>Cherries</td>
<td>$79 million</td>
</tr>
</tbody>
</table>

Each of the plant industries listed in Table 1 has a different reliance on new germplasm to meet the challenges of increasing production, changes in climate and growing conditions, changing consumer and market demands and improved pest and disease resistance.

The volume of material imported through PEPQ therefore differs for each industry according to their needs and also the cost and risks of importing plants. Table 2 provides information on the number of plants released or destroyed through the PEPQ stations at Knoxfield, Eastern Creek, South Australian Research and Development Institute, Eagle Farm, Kingston\(^3\) and South Perth\(^4\). Plant lines may be destroyed while undergoing PEPQ for a number of reasons including the detection of a quarantinable pest, the detection of a non-quarantinable pest that compromises the high health status of imported material or issues with the importer complying with permit requirements.

Examples of high priority quarantinable pests that have been detected in plants undergoing PEPQ include Citrus Viroid II, Apple scar skin viroid and Apple stem grooving virus. Many other pests and diseases have been identified in material undergoing PEPQ that have resulted in material being destroyed as they may represent exotic strains of established pests.

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\(^3\) Information for Kingston supplied for the period between June 2007 – July 2008 only
\(^4\) Information for South Perth supplied for the period between June 2007 – July 2008 and July 2009 – June 2010 only
Table 2  Volume of plant material processed through Post Entry Plant Quarantine 2007 – 2010

<table>
<thead>
<tr>
<th>Plant type</th>
<th>Number of plants released</th>
<th>Number of plants destroyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almond</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Stonefruit (Peach, plum, nectarine etc)</td>
<td>327</td>
<td>40</td>
</tr>
<tr>
<td>Pome (Apple and pear)</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td>Citrus (Orange, lemon, mandarin etc)</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Banana</td>
<td>7</td>
<td>113</td>
</tr>
<tr>
<td>Grapevine</td>
<td>161</td>
<td>18</td>
</tr>
<tr>
<td>Potato</td>
<td>57</td>
<td>7</td>
</tr>
<tr>
<td>Nut (other than almond)</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td>Avocado</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Olive</td>
<td>48</td>
<td>8</td>
</tr>
<tr>
<td>Clonal grass</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>Forestry spp.</td>
<td>1</td>
<td>87</td>
</tr>
<tr>
<td>High risk ornamentals</td>
<td>2374</td>
<td>124</td>
</tr>
<tr>
<td>Medium/low risk ornamentals</td>
<td>108,736</td>
<td>45,425</td>
</tr>
<tr>
<td>Seed lines (grain, legume etc)</td>
<td>11,757</td>
<td>223</td>
</tr>
</tbody>
</table>

Examples of the importance of this material for breeding and development of new varieties for different crop types are outlined below.

For annual crops such as grains, rice and cotton, development of a new variety can take 6 – 8 years and there is a high reliance on consistent release of new varieties to continually improve yield, grain quality, disease resistance and meet market demand.

For tree crops such as citrus, up until 2009, over 70 public varieties and at least 20 varieties protected by Plant Breeders Rights (PBR) had been imported and released from PEPQ for evaluation under Australian conditions and commercialisation. A further 13 are currently undergoing PEPQ. Other horticultural tree crops have a similar length of time from importation of breeding material to full commercial production, and most therefore have comparatively few varieties when compared with annual crops. New germplasm is still considered critical for these industries, though, as improvements to varieties have resulted in more uniform and productive orchards with increased
resistance to pests and fruit that meets evolving consumer and market demands. Improvements have also been important in enabling fruit to be supplied to domestic and global consumers from different parts of Australia over a longer season.

For the strawberry industry, importation occurs via tissue culture and often new varieties are released directly from imported nursery stock. It has been estimated that distribution of certified (pathogen tested) nursery stock has been associated with in excess of 10 fold\(^5\) increases in productivity.

For the viticulture industry, development of new rootstocks is important for each end use (wine, dried fruit or table grape). Development, evaluation and release of a new variety can take up to 20 years. In particular, the dried grape industry has indicated that they are going through a consolidation phase with a solid market outlook. They see ongoing access to new varieties from overseas as an important factor in achieving continued improvements in productivity and the ability to supply what the market requires.

Across all industries there is nothing to suggest that the requirement to keep accessing germplasm from outside Australia will diminish in the future.

\(^5\) Submission to the Quarantine and Biosecurity Review from the Toolangi certified Strawberry Growers Cooperative and the Victorian Strawberry Industry Certification Authority (2008)
Impact of plant pest incursions

Plant pest incursions can have catastrophic impacts on industries and whole communities. Past incursions of Citrus canker, Black Sigatoka, Papaya fruit fly and, at the present time, Myrtle rust and Chestnut blight are showing that the cost of mounting incursion responses can amount to tens and even hundreds of millions of dollars. For example the ongoing eradication response to Red Imported Fire Ant has cost $202 million to the end of the 2009/10 financial year.

To demonstrate the potential impact of an incursion on the agricultural sector PHA commissioned an economic impact assessment of a hypothetical outbreak of Pierce’s Disease in the Barossa Valley. Two scenarios were considered. The first assumed 10 properties were affected and 150 hectares of vines were destroyed in eradicating the incursion. The welfare cost of this response amounted to $6.5 million and 40 jobs were lost. In addition it was estimated that $2 million was spent on additional sprays and another $2 million on research to eradicate the pest. For the second scenario the incursion could not be eradicated and within a decade the Barossa Valley vineyards were virtually wiped out. The welfare cost alone was estimated at $180 million and the economic loss in heritage value (tourism and iconic wines such as Henschke’s Hill of Grace) was beyond the scope of the model to measure. In addition, it was estimated that 250 jobs would be lost in the region and that there would be net migration from the area.

Detections of suspected exotic plant pests are common. AQIS has reported that upwards of 20,000 confirmed exotic pest interceptions are made at the border each year. Each year, the Consultative Committee for Emergency Plant Pests (CCEPP) is called upon to determine whether post border detections are Emergency Plant Pests or whether eradication is technically feasible and would be economically viable. In 2010 the CCEPP met on average once each week to consider new pest detections, indicating the constant pressure on national emergency response systems for the plant sectors.

A reduction in Australian Government PEPQ support for high-risk material would likely increase the potential for incursions of serious plant pests, their potential impact and the costs to the community of mounting responses. This has been the experience in other countries where devolution to the private sector has been attempted.

Even the best publicly run quarantine facilities sometimes allow breaches. A small number of exotic pests are believed to have entered Australia through PEPQ, indicating that even with rigorous systems in place, failures can occur, usually as a result of gaps in knowledge on host range, slow growing pathogens or cryptic disease expression. Examples include Wheat Streak Mosaic Virus and Mango Malformation Disease.

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6 The eradication response to Citrus canker from 2005 was estimated to have cost $18 million in direct destruction and surveillance. Black Sigatoka in bananas nearly $13 million, and Papaya fruit fly more than $34 million.
Australian border quarantine does not operate on the basis of zero risk. When run effectively, government PEPQ facilities reduce risks to an acceptable level – a level consistent with Australia’s Appropriate Level Of Protection (ALOP).

Appropriate funding and systems of oversight are important determinants of performance with PEPQ facilities. As part of the broader review of post entry quarantine arrangements both these factors need attention. Of great concern is the potential for a reduction in Government support for PEPQ and/or cost increases for industry to increase the risk of illegal smuggling of plant material. Even at current levels of Government support through the anti-smuggling subsidy scheme it is thought that detections of exotic pests, such as Citrus canker, have been the result of illegal importation. Grape varieties such as Menindee Seedless and Red Globe are also suspected to have been illegally introduced into Australia.

In assessing the rationale for any potential reduction of investment in PEPQ into the future, account needs to be taken of the potential response costs to the Australian Government associated with the inevitable heightened risk of incursions.

**Expertise and facilities required for Post-Entry Plant Quarantine**

PHA and most of its Industry Members believe that a reliance on private PEPQ facilities to undertake the complex plant propagation and disease testing protocols required may increase the risk of loss of plant material or of exotic pests passing undetected through the PEPQ process. This may occur as a result of the need for high levels of expertise and access to the specialist facilities required for the large range of plant species requiring PEPQ.

**Expertise**

The extensive number of high priority and quarantinable pests for which plant species are assessed in PEPQ requires an array of pathology and entomology expertise and equipment for accurate diagnosis. Significant expertise is also needed to recognise and diagnose pest and disease symptoms as, for many pests, visual detection can be difficult because of the way in which disease is expressed in the plant. This is particularly true for viruses and other slow growing species e.g. *Fusarium* (spp.). It needs to be recognised too that testing in PEPQ is for pests or strains not present in Australia and there are few skilled professionals with knowledge of what to look for and how to undertake diagnosis.

In addition, many different plant species currently undergo PEPQ, requiring high levels of expertise in growth and propagation. Skill in growing plants is essential both to produce high health material suitable for plant production once it clears PEPQ, but also more importantly, if personnel do not have a good understanding of normal plant growth, they are unlikely to identify disease expression of new symptoms.
It is difficult to see how sufficient levels of expertise for managing high risk material could be maintained other than through an Australian Government supported facility, properly integrated into border quarantine operations. Growing crops in glass or screen houses requires specialised skills as many of the crops do not naturally get produced in this type of environment and show symptoms linked to the unnatural growing conditions which may mask serious plant pests. The specialist horticultural staff at government PEPQ facilities have the expertise to produce high quality plants in these environments, in turn enabling diagnosticians to do their work effectively. As an example, wheat or stone fruit are not normally grown in pots in a glasshouse and can display unusual symptoms linked solely to these types of growing conditions.

**Specialist facilities**

Many types of high risk plant material are only permitted to be processed in the two Australian Government stations at Eastern Creek and Knoxfield, essentially because of the specialised expertise and facilities required for their PEPQ. Several state government facilities operate under compliance agreements with AQIS to handle some high risk material, however all have indicated their continued viability is under threat given the high cost of maintaining facilities. It is understood facilities at both Kingston (Tasmania) and South Perth (Western Australia) are closing or are earmarked for closure thus limiting options for industry to import new genetic material.

Given the diverse range of climate zones in Australia, one national facility will not be sufficient for PEPQ of all plant types as optimum plant growth conditions (appropriate nutrients, growth media, temperature, humidity and day length) are needed to produce vegetative growth and/or seed or fruit production. While growing conditions for tropical or temperate plants can be reproduced using lighting, temperature and humidity control, substantial costs will be incurred maintaining these conditions outside the appropriate region.

If the option of a single Australian Government facility is available in only one region, ongoing commitment to maintaining facilities in a second climatic zone should be considered through either a state government or private partnership.

If growing conditions are not suitable, plants of poor health will result, potentially increasing costs, delaying release of new material and slowing breeding programs. More importantly, expression of pests and diseases may be compromised or unclear, and where testing relies on visual inspection, the risk of exotic pests passing through PEPQ undetected is high. Should this occur, at least part of the cost of emergency response for incursion management will be borne by the Australian Government.

The Emergency Plant Pest Response Deed (EPPRD)\(^7\), to which the Australian Government is a signatory, contains a clause that states if a Party can be shown to be implicated with the introduction of a new pest then that Party will be liable for the entire cost of the response. Original Parties to the EPPRD drafted this

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\(^7\) The EPPRD is a formal legally binding agreement between PHA, the Australian Government, all state and territory governments and 27 plant industry signatories, that covers the management and funding of eradication responses to EPP incidents. The EPPRD, of which PHA is the custodian came into effect on 26 October 2005.
clause to target individuals or companies who smuggled material into Australia. However, it was also recognised that if the Australian Government did not maintain import conditions appropriate to meet the Australian ALOP then the Australian Government would be liable for the response costs.

Costs of Post-Entry Plant Quarantine

Importation of plant material can be extremely costly, due to the long periods of time (a minimum of 24 months for Prunus spp.) and the specialist expertise and plant disease testing required. Importers pay for processing plant material through PEPQ, with high risk material such as Prunus costing approximately $4,000 per plant and Grapevines costing approximately $2,200 per plant. The full cost of processing plant material is actually approximately 60% higher as, in recognition of the high costs involved with PEPQ, the Australian Government provides the anti-smuggling subsidy which contributes $1 million per annum to PEPQ operations. This subsidy allays the cost of ‘bench space’ in PEPQ, with importers paying the full cost of the diagnostic testing involved in importation of each plant type.

Retention of the subsidy or an equivalent scheme is important for recognising the high costs involved for importers of high-risk material, the potential gains involved (including spill-over benefits to the community and economy), and the potential for individuals to illegally smuggle plant material to avoid these costs. Of concern to industry is that this subsidy has not been indexed for inflation since its inception over ten years ago and the net present value of the subsidy has therefore effectively decreased each year.

The risk of smuggling plant material is considered particularly high as illegal importation of budwood or cuttings requires no special treatment for transport unlike animal material such as frozen embryos or semen. Budwood and cuttings can directly carry pests and diseases which have a high likelihood of establishment of an exotic pest in a production area. The suspected illegal importation of Citrus material carrying citrus canker into Australia in a production area in Queensland highlights this point.

It is considered unlikely that private facilities would be able to remain viable given the high costs involved with maintaining facilities and expertise. This is highlighted by the example from New Zealand where, in the early 2000’s the New Zealand government removed all support for PEPQ and devolved operations to private concerns. Within six years, the Ministry for Agriculture and Fisheries had reinstated PEPQ operations due to inability of private industries to maintain the specialist facilities and expertise with the appropriate rigour to meet their ALOP.

If private facilities were established as the only source of PEPQ, the Beale Review recognised this may put further upward pressure on costs of PEPQ for industry. **Recommendation 61** from the Beale Review states: “The Commonwealth should own and operate specialised quarantine facilities where monopoly rents might be charged if such facilities were operated privately”.

Conclusions

PEPQ of high risk plant material requires specialist testing and diagnosis and the need for specialist expertise in plant production and propagation, making PEPQ a costly and time consuming process. While industries recognise the importance of conducting PEPQ to high standards to minimise the introduction of exotic plant pests and produce high health material, they already face pressure from the current screening charges which, for high risk material, can be substantial even allowing for Australian Government subsidies. In addition, after outlaying these substantial costs there is no assurance new varieties will perform under Australian conditions adding to the financial risk of importing new genetic material.

It is feared that removal of these Government subsidies, and/or allowing private companies to manage PEPQ will further increase charges for importation of new material. This could increase the risk of illegal smuggling, placing significant pressure on surveillance for early detection of plant pests, emergency response for incursion management and/or pest management in plant production systems.

In the absence of subsidies to maintain the viability of costs, there may be no option for operators of PEPQ facilities but to reduce the rigour of PEPQ processes. PHA believes that such an outcome would be undesirable and more costly in the long run. This is because imported plant germplasm is usually planted directly into production areas. Should there be failures of PEPQ processes, the risk of establishment of new pests into production areas will increase, and the potential response costs to industry and the community will far exceed those associated with maintaining PEPQ facilities.

The ability for plant industries to import breeding material and new varieties to improve their productivity and sustainability is critical for industry growth, food security, the ability to meet evolving market demands and the Australian economy. A reduction in PEPQ services in Australia will compromise the development of new varieties and improvements in yield, quality, climate adaptation and pest resistance.

Without suitable levels of expertise and effective PEPQ systems and facilities in Australia, the integrity of post border plant biosecurity and pest management will be placed under extreme pressure. Given the significant costs to both industry and government of a failure in PEPQ, maintaining secure, accessible, auditable and cost effective facilities with appropriate expertise and is considered an essential part of border quarantine. It is therefore imperative that the Australian Government provides a PEPQ facility to ensure continuity of supply of high health imported plant nursery stock as well as maintenance of capacity, capability and expertise in this vital area.