

NATIONAL VINE HEALTH STEERING COMMITTEE

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NVHSC welcomes the opportunity to respond from the perspective of the grape industries, to the Issues Paper released by the Quarantine and Biosecurity Review Panel (March 14, 2008).

BACKGROUND - NVHSC

The National Vine Health Steering Committee (NVHSC) is a consultative group involving all major stakeholders (Commonwealth, State Governments and industry peak bodies) and Plant Health Australia (PHA) with an interest in grape health issues, specifically in relation to grapevine pests and diseases of national economic significance.

The industry (inclusive of wine, table and dried grapes) has recognised strengths and opportunities that are relevant to the NVHSC, and also Australian Quarantine and Inspection Service (AQIS), Biosecurity Australia (BA) and the Post-Entry Plant Industry Consultative Committee (PEPICC). As a result of isolation, the health status of grape material in Australia tends to be superior to that in many other countries. This has been supported by our quarantine system. Significant opportunities exist for research and development, and reduction of pest and disease losses has been one long-term focus. The industry is innovative, willing to adopt new technology and there is a high level of cooperation. A nationally consistent approach to vine health issues from pre-border to post-border jurisdictions would further assist in minimising losses and maximising the benefits from scarce biosecurity-focussed resources.

Against the background of industry strengths and opportunities there are a number of threats and weaknesses both within industry, and within the environment in which the industry operates. The major threats relevant to this review are new exotic pests and diseases (pests) and exotic strains of endemic pests; further spread of serious pests and diseases in Australia; the changing nature of quarantine and the increase in extent and scale of host material movement globally; our diagnostic capacity and the resources devoted to diagnostic, detection and taxonomic capacity building; and the generally low awareness of pest risks, industry biosecurity, and Australia's responsibilities in regard to international trade. Given the wide host range of some grape pests, the grapevine industry is also threatened by the pre-border and post-border activities of other industries (i.e. stone fruit, citrus, nursery, ornamental, landscape etc.). The grape industries recognise the need to expand communication with each of these, and for cross-linked research and biosecurity linkages, to be strengthened.

The potential impact of the identified threats on biosecurity, production costs and access to markets in such a competitive industry, have been recognised by NVHSC, but have mostly focussed on post-border biosecurity. The initial business of the NVHSC was the development of National Phylloxera Management Protocols for the movement of grapevine materials from phylloxera-infested zones (PIZs). The Protocols now encompass these and broader issues related to phylloxera management and biosecurity: plant and machinery movement, area status determination and maintenance. The Protocols are updated annually and as technological advancements require. They have been widely adopted, are reinforced in complementary state legislations and have served to minimise the threat of long distance phylloxera movement.

Other NVHSC technical outputs have had pre- and post-border relevance. They include: responses to import risk analyses (IRA) for table grapes; import conditions review (table grapes); development of the viticulture industry protection plan - the predecessor of the viticulture Industry Biosecurity Plan (IBP); review of vine planting material high health parameters; industry input to and review of the grapevine leaf rust eradication (GLR)

The NVHSC is represented by the Winemakers' Federation of Australia, the Winegrape Growers' Council of Australia, Australian Vine Improvement Assoc, Grape and Wine Research and Development Corporation and State and Commonwealth Governments

campaign. These, and other NVHSC activities regarding legislation harmonisation, incursion management planning, research program prioritisation, and input to risk assessment debates regarding compost use and movement, heat treatment of planting material and machinery etc, have required industry commitment to biosecurity, communication and consultation with Plant Health Australia (PHA), Domestic Quarantine and Market Access Working Group (DQMAWG), state governments, Plant Health Committee (PHC), AQIS and BA.

QUARANTINE & BIOSECURITY REVIEW

Industry Contributions to Industry Biosecurity

As noted above, the NVHSC is committed to improving biosecurity in the grape industries. Its efforts and focus however are primarily post-border. It is the view of NVHSC and the three grape industries that they must strengthen their resolve to support quarantine and biosecurity efforts, through being more actively involved in the government-industry partnership directing pre-border and at-border biosecurity and quarantine. Quarantine and biosecurity are shared responsibilities and the grape industry may contribute more at the national level, through:

- **Increased industry communication with, and engagement of, AQIS and BA.**
This has been addressed to some degree with grape industry representation on PEPICC, the three grape industries' membership of PHA, and recent exchanges with BA regarding California table grape import conditions.

Mutual confidence in, and respect for the technical strengths of each party would enhance IRA preparation, import conditions (ICON) assessments, preparation of IBPs through faster risk assessment, and would encourage regular dialogue.

Additional regular contact of industry with the Northern Australia Quarantine Service (NAQS) may also have provided early intelligence on the risk associated with personnel and equipment movement between Darwin and East Timor, in regard to passive and natural pathways for movement of GLR.
- **Co-ordination of surveillance data into a national database**
This has been addressed in part through the formal surveying of grape production regions for the assignment of phylloxera status.

The wine grape industry's willingness to supply long-term survey data as a case study for BioSIRT implementation is evidence of its commitment to progress biosecurity intelligence at the national level.

The wider surveillance of grapes (and nurseries) for exotic organisms, and economically-important endemic organisms post-border, however is uncoordinated, limited by the availability of suitably qualified inspectors (with this as an identified responsibility), and the lack of a nationally-co-ordinated data repository. This may be partially addressed through the training and assignment of such tasks to Industry Liaison Officers (through PHA) in pre-determined high risk areas.
- **Co-ordination of importation and PEQ data**
The grape industries have a history (until 1996) of collating details of grape importations. The opportunity for this to continue was lost primarily with the introduction of the federal Privacy Act. A relevant consequence of this is the current difficulty industry has in identifying the quality and sources of in-coming inventory at the national level. This has biosecurity ramifications since industry no longer has independently provided intelligence on pre-border threats and at-border incidences and

activities, the frequency of interceptions, the frequency of entries by variety clone and source etc. Some such information is still recorded by AQIS, but it is not routinely made available to industry. (See 4.1)

- **Increasing their knowledge of the susceptibility (or tolerance) of Australian native (indigenous) plant material to exotic grape pests (diseases and pests)**
Without such essential information, effective contingency plans and realistic assessment of risks associated with exotics are not possible. This was seen in part with the previously unknown susceptibility of native *Ampelocissus* spp. to GLR.
- **Increasing their knowledge of the potential efficiency of Australian indigenous insects, as vectors of exotic grape diseases**
Without such knowledge the assessments of risk of establishment and local spread of exotic diseases, cannot be relied upon.
- **Increased liaison/communication with Australian Centre for International Agricultural Research (ACIAR) and input to the CRC National Plant Biosecurity (CRCNBP)**
To address the current lack of essential information on potential native vectors and hosts (see above), it is possible that increased engagement of ACIAR and CRCNBP and awareness of their international research programs and locations could result in the inclusion of some relevant screening and collaborative research, in countries where exotic grape pests are present.

Industry views of the current pre-border and at-border biosecurity and quarantine

There is an acknowledged continuum between policy development, post-entry quarantine (PEQ) decisions and operations, and subsequent industry and regional biosecurity. In fact industry biosecurity post-border is dependent on the pre-border and at-border biosecurity and quarantine. This presents opportunities (for governments and industry) but also considerable challenges for the involved parties. The resources available and devoted to each step directly influence the effectiveness of each link in the chain.

The NVHSC has discussed, taken advice on, and responded to many issues that affect grapevine health and industry biosecurity. Many of these issues are underpinned by the formally-provided quarantine services, policies and operations.

It is the view of NVHSC that there are both opportunities and a need for strengthened national plant biosecurity and quarantine. The following mechanisms will assist in achieving this and a subsequent increase in confidence in the systems:

- **Increased, regular and early communication**
(AQIS and BA must have regular dialogue with the grape industry; AQIS and BA communication increased; industry with its stakeholders)
- **Increased and early consultation**
(AQIS and BA with technical committees and experts, like NVHSC; members of the Eminent Scientist Group)
- **Increased transparency**
(In setting acceptable level of risk/protection (ALOP); IRA scientific review process and consultation)

- **Increased (to equivalent of that applied to exports) scrutiny of potential imports; strengthened pre-border risk management**
(Audits of certification programs, ‘area freedom’ determinations, diagnostic capabilities etc)
- **Increased resources devoted to expertise development and retention within AQIS and BA and state departments**
(Diagnostic expertise, taxonomic expertise, opportunities to increase awareness of international activities and incursion experiences; new technology implementation)
- **Increased responsiveness to and acceptance of feedback and input from industry, by AQIS and BA**
(Mutual respect for technical capabilities and contributions of all non-government parties will assist with timeliness of reviews; confidence in the services, operations and quality of AQIS and BA outputs; priority setting; transparency)
- **Decreased out-sourcing of quarantine responsibilities to under-qualified entities**
(There are justified biosecurity concerns about private quarantine-approved premises [QAPs], their operations, and lack of audit and qualification scrutiny)

SPECIFIC COMMENTS & EXAMPLES FROM THE GRAPE INDUSTRIES

1. PRE-BORDER

The effectiveness and appropriateness of ICON and post-entry quarantine (PEQ) practices are dependent on the accuracy of the plant health information provided by the exporting country, pre-border intelligence, and the capacity to evaluate and validate it by the importing country (Australia). The diagnostic and taxonomic capacities in both countries and quality of pre-border intelligence (and resources devoted to it and data management) therefore underpin Australia’s plant biosecurity at the border, and industry biosecurity thereafter.

<i>Current arrangements to achieve Australia’s ALOP</i>
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1.1 Validation of Information

The capacity for AQIS to validate phytosanitary certificates and the data provided on import permits, is limited in most cases, and especially when:

- Phytosanitary certificates based on visual inspections are issued at variable times prior to the product reaching the point of export.
- Inspected material is not in a development stage or time period that allows expression of symptoms (eg. latent bacteria, viruses in seeds, plants; dormant cuttings without leaves)
- Regional ‘area freedom’ from a pest is claimed by a country with an established presence of the same pest, elsewhere (i.e. in another region), without associated verification of quality and extent of surveillance history of the host production regions
- The ‘original’ source of material is not identified.
- ‘Wholesalers’ (who source from multiple suppliers and states, regions etc) provide plant material for export to ‘approved’ export entities, which list their location as the ‘origin’ of the plant material. Material provided in this manner is not traceable by AQIS to its original source, yet may qualify for reduced PEQ testing.

- Material is imported and then re-exported by an ‘approved’ entity, without ‘origin’ being accurately listed.

1.2 Import Conditions

In the grape industries, greater than 95% of imports are non-certified and from ‘non-approved’ sources. Categorisation of grape sources as “approved”, in the absence of regular auditing of certification programs, surveillance and monitoring, and adequate understandings of pest and host profiles in the region, and the regular trade of exporting countries for the same commodity (eg. table grapes into California from Chile – are they re-exported to Australia?), is not justified.

- **Justification for PEQ Testing by ‘source categorisation’**
 - (a) In cases where there has been no recent AQIS audit of the “approved” status, (i.e. traceable evidence to the source of material, certification standards and programs), reduced testing in PEQ cannot be justified. Source categorisations are currently not suitable determinants of required PEQ testing.
- **Source of Material**
 - (a) See 1.1 and 1.2 above.
 - (b) NVHSC recently (2006/07) contributed technical information that resulted in amendment of the proposed import conditions for table grapes from California¹. California is a phylloxera-infested zone (PIZ) and as such a prohibited source of grape material under current Australian legislation in three states, and a restricted movement product in other states. The agreed resolution has resulted in variable import conditions for table grapes from California.
- **Non-host Pathways and ‘Natural’ Pathways**
 - (c) Risk assessment of non-host pathways by BA has been limited and as such the grape industry remains vulnerable to unexpected threats, not appearing on the grape pathway, i.e. passive introduction of GLR from East Timor, potential introduction of *Xylella fastidiosa* (cause of Pierce’s Disease) in latent or asymptomatic (and often non-commercial) hosts which are eligible for less-stringent PEQ testing (i.e. ornamentals).

¹ In the initial Californian table grape IRA, bunches were not considered by BA to be on the pathway for phylloxera. However research evidence from Australia had demonstrated this clearly. Early consultation with industry technical groups and experts (i.e. NVHSC) would have provided this information prior to the proposed import condition changes being considered in-house and discussed with the USA.

2. *AT-BORDER*

Industry and government authorities must work together to determine the capability of AQIS to undertake necessary, additional testing using efficient and reliable methods and suitable controls, and the cost of it to the importer.

*Resourcing levels and systems and their alignment
with risk in delivering requisite services*

*Government and institutional arrangements to deliver
biosecurity, quarantine and export certification services*

2.1 Post-entry quarantine - Operations

Most stakeholders in horticultural industries assume that plant material released from PEQ has a defined health status. This is not the case (except for citrus) for most perennial horticultural plant material because AQIS is required only to test for the presence of quarantineable (exotic) organisms. To enhance biosecurity and quarantine, more complete PEQ testing that includes exotic strains of endemic pests, and endemic pests, is needed. In the absence of more complete PEQ testing, industry biosecurity remains compromised because of the usual practice of perennial material importers to either 1) sell immediately through retail or wholesale outlets or 2) to propagate and multiply planting material immediately on release, and frequently without any further inspections or testing.

- **Diagnostic Capacity and Capabilities**

Increased resources devoted to training and development of diagnostic and taxonomic capabilities, are needed.

- (a) There is little evidence from industry or AQIS, of increasing commitment to and resources for training, development and retention of diagnostic expertise. It remains our view that expertise in new technology and the identification of exotic pests, should be at the least, increased within AQIS and the State departments. Evidence suggests that there is a general lack of funds, or a reluctance to support travel to international meetings or laboratories where diagnostic expertise in exotics can be quickly attained. Scholarships however for some government employees have recently been made available in this area, and this is commended. Industry must then acquaint itself with the locations of relevant diagnostic expertise.
- (b) Specifically there are concerns relating to: the capacity to identify and detect egg masses of some insect pests by at-border inspectors, and plant material that potentially carries latent bacteria, viruses, phytoplasmas, and/or viroids (without active testing); the rapid (approx. 12 hours) release of seed of perennial horticultural hosts (eg. *Prunus* spp.) without active testing or grow-out, and the release of some annual vegetable seed (also bulbs, corms) without inspections or permits; the capacity to evaluate risk associated with entry of endemic pests or diseases (for which there no active testing) that may have existing cross-resistance to a range of available control methods (eg pesticides, herbicides).

- **Exotic Strains of Endemic Pests**

Exotic strains of endemic pests have not always been included in IRAs, nor are they routinely included in PEQ testing. The restrictive conditions for importation of research specimens/samples have contributed to this situation whereby exotic strains are rarely used in the development of diagnostic/detection protocols, or as controls in PEQ screening. This presents a biosecurity threat that many industries are unaware of, and therefore ill-prepared for.

(c) Several countries (i.e. Taiwan, Kosovo, Central America, South America, USA, Mexico, and Tahiti) have recorded the presence of the exotic bacterium (and strains of it) *Xylella fastidiosa*. Grape material from USA is routinely heat-treated to curb introduction of this bacterium, and citrus material is screened or prohibited depending on its source, but it is unclear if other potential hosts (i.e. almond, ornamentals etc) from the USA and other countries with the bacterium, are specifically and routinely tested for this exotic organism. Similarly, the virulent Spanish strain of PDV is not included as a control in any PEQ testing of *Prunus* spp.

- **PEQ Test Uniformity, Methodologies and Conditions**

Variability in PEQ testing exists between laboratories in different states. Harmonised protocols, despite the efforts of the Sub-committee on Plant Health Diagnostic Standards (SPHDS), are yet to be achieved.

At present most grape material entering Australia undergoes passive (visual inspections) testing, biological indexing and some serological testing in PEQ. The case for increased active testing (eg. molecular, hybridisation) for viroids, phytoplasmas, and additional viruses, were presented to BA over 6 years ago by AQIS pathologist, Mark Whattam and the Grape and Wine Research and Development Corporation (GWRDC).

(d) The chosen rootstocks (for woody indexing), test methodologies (and source and choice of positive controls) and test conditions (i.e. temperature, humidity, misting etc) must be conducive to the development of disease expression, and detection.

PEQ testing on a single rootstock (even if it is susceptible to most diseases targeted), in a regime of ‘moderate’ glasshouse conditions, is unlikely to maximise the opportunity for detection of all exotic viruses (or other pathogens), and epiphytic contaminants.

- **Technical Review of New Detection and Diagnostic Technologies**

Technical review of new technologies should be given high priority by BA.

(e) There is evidence from several perennial horticultural industries that AQIS has been unable to introduce and implement new technology and test methodologies, due to their delayed approval by BA. The revised requirements for grapes in PEQ (Whattam report), have not been implemented and grape PEQ testing continues to be less efficient and effective than it could otherwise be.

- **PEQ Treatments**

Heat-treatment is a useful PEQ ‘clean-up’ treatment after which indexing is again required. If grape material is heat-treated by AQIS (as it is for *X. fastidiosa*), or the exporting country, it should be re-indexed and labelled (eg. with suffix HT) at release and thereafter, to reflect the application of the heat-treatment.

2.2 Industry Intelligence about Importations and Future Traceability of Entries

The limitations placed on the release of import information, by the Privacy Act have resulted in a reduced capacity within the grape industry to manage its variety and clone inventory and its traceability nationally; to keep updated national lists of grape material accession numbers, sources and their PEQ treatment; to identify consistently poor or risky sources of imported material; and to learn from pest (or illegal plant) interception records. Traceability is critical to post-border quarantine, and industry biosecurity.

Some records (number of varieties or clones) are provided through PEPICCC, but these are insufficient to assist industry in biosecurity management. The information limitations imposed have coincided also with the changing volume and nature of importations. The vast majority of importations (> 95%) today are of proprietary scion and rootstock lines (that may qualify for Plant Breeders' Rights) from non-approved sources. The sources of grape material (and other perennials, like *Prunus* spp. etc) today are generally not internationally-known, research-based improvement programs, but rather unaudited private sources that release material prior to pathogen or horticultural acceptability evaluations. Pre-border (and post-border) biosecurity-focussed intelligence on most of these sources does not exist.

2.3 QAPs and Outsourcing of Quarantine Responsibilities

QAPs have conferred upon them by AQIS, authority to determine plant health status (usually fungal, bacterial) through inspection of plants growing under their management, in their facilities distant from AQIS border premises. None of these facilities have a core commitment to biosecurity assurance for the national benefit.

- (a) In private QAPs especially, there are opportunities for early propagation of material not fully cleared from PEQ. This presents and promotes, unnecessary risk. Staff qualifications, irregular on-site audits by AQIS (with whom possible conflicts of interest exist), and this pre-release opportunity, render quarantine and biosecurity safeguards in private QAPs unacceptably weak. Institutional QAPs are generally served by more qualified staff and the perceived commercial advantages from pre-release propagation, generally do not exist.

Private QAPs are considered a threat to national grape industry biosecurity, and it is therefore preferred that no grape material (commercial or ornamental, imported by industry or privately imported) have PEQ passage through a private QAP.

- (b) Out-sourcing of specific testing for exotic pests however is warranted in situations where an industry or containment facility (i.e. citrus) has developed an expertise or has equipment, superior to that available at border quarantine premises.
- (c) The relative merits of a centralised diagnostic facility for perennial horticulture should be considered, given the nature of threats shared across such industries, the 'best practice' testing methodologies and technologies common to many of the industries etc., and the current need to maximise the use and benefit of limited resources (specialist expertise, funding etc) focussed on biosecurity. Such a facility would allow greater consistency and transparency in PEQ and post-border quarantine and biosecurity, increased opportunities for communication and consultation across relevant industries, and an additional forum to underpin harmonisation of interstate quarantine legislation to the benefit of all horticultural industries.

3. **POST-BORDER**

3.1 **Post-border Quarantine and Biosecurity Management**

The grape industry appreciates that the following post-border issues, while critical to national plant biosecurity and complementary to the at-border and pre-border efforts, are not the subject of this review.

- (a) There is no current requirement for 'PEQ-equivalent' testing of locally-bred plant material, despite 'parent' material (budwood, cuttings, seed, pollen) very commonly being from international sources, and the entry of such material to multiplication schemes that provide the planting material basis of entire industries.
- (b) Co-ordinated response to a grape incursion may be hindered by the lack of harmonisation in quarantine protocols and legislation, between states. This is something NVHSC is working on in regard to phylloxera.
- (c) Industry has limited capacity to manage its importation inventory with a national biosecurity focus. There is no requirement for AQIS to report to industry on imports that have failed due to exotic organism presence.

Similarly there is no opportunity today for the industry *per se* to trace vines to their source, without the co-operation of the specific importer. This loss of central inventory/register traceability of vines is viewed as a reduction in national industry biosecurity. There is no requirement for an importer to retain either the name or accession number of clone on importation, nor any importation details (including its health status on arrival, or at PEQ release). There is no requirement for specific information on the source of material (to specific vine and row) to be provided or retained. The provision of such data, if they exist within AQIS, is not assured even with approval of the importer.

- (d) The grape industry, in the interest of nationally-improved plant biosecurity and enhanced contingency planning, requests that full documentation of surveillance methodology; diagnostic timeframes; impediments to eradication observed or canvassed; likely sources of infected material etc; and lessons learned from eradication programs (i.e. citrus canker, GLR etc) be made available to other industries.
- (e) The grape industry has sources of high health planting material of defined health status. It should be recognised that this is not the case for many perennial horticultural industries. Without such material, many IBPs will be rendered only partially effective in the event of an eradication response to an incursion. There is an underlying assumption in contingency plans and in the IBPs, that 'clean' material is available for re-planting.
- (f) For plant biosecurity in general, there must be agreed responsible and transparent justifications for the label, '*virus-tested*'. It compromises commercial risk management and industry biosecurity when the label is applied indiscriminately to material for which there are no provided records of the time and target of testing, or when the testing has not been inclusive of endemic, economically-important viruses.

4. COMMUNICATION AND CONSULTATION

<i>Public Communication, consultation and research and review process</i>
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Issues related to this Term of Reference have been included throughout this submission.

The grape industry and NVHSC recognise that national plant biosecurity and quarantine is a complex responsibility, requiring commitment of resources from all government levels and from the industry; a commitment to share technical information and intelligence that might contribute to nationally-improved plant biosecurity; a commitment to engage with other industries and entities that influence risk; and a commitment to develop expertise such that timeframes (for response, communication, diagnostics, eradication decisions etc) and implementation of biosecurity-focussed programs, are not impeded by a lack of awareness, resources or qualified personnel.

Similarly there must be a commitment from all parties to respond in a timely manner to technical updates, and information and input of biosecurity and/or quarantine relevance. Agreed, practical response times are needed. We believe 45 days is both reasonable and practical.