



**Phylloxera and Grape Industry
Board of South Australia**

Phylloxera Risk Assessment

undertaken by the Phylloxera
and Grape Industry Board of SA

Farm gate
practice is
the best
defence

September 2012

The Issue

In November 2011, the South Australian Government revised the Plant Quarantine Standards (PQS) to bring regulations relating to Phylloxera in line with the National Phylloxera Management Protocol. Earlier this year, some industry members raised concerns that these changes heightened the risk of Phylloxera establishment in South Australia. **The concerns were:**

1. The surveying method used to determine a status upgrade from a Phylloxera Restricted Zone (PRZ) to a Phylloxera Exclusion Zone (PEZ) is not adequate and could result in the establishment of Phylloxera in South Australia.
2. The proximity of a PEZ to a Phylloxera Infested Zone (PIZ) creates a higher risk to Phylloxera establishing in South Australia.
3. That machinery moving from a newly endorsed PEZ into South Australia increases the risk of Phylloxera establishing.
4. The movement of grapes from a newly endorsed PEZ into South Australia can result in Phylloxera establishing in South Australia.
5. That by changing the SA Plant Quarantine Standards to align with the National Phylloxera Management Protocol the risk of Phylloxera establishing in South Australia increases.

As a result of discussions between the Minister for Agriculture, Food and Fisheries and the Board about these concerns, the Minister re-instated the pre-November 2011 Plant Quarantine Standard to allow the Board to examine these concerns in detail and to consult with the industry on changes to the PQS.

The Phylloxera and Grape Industry Board of South Australia (PGIBSA) is a statutory organisation established by the *Phylloxera and Grape Industry Act, 1995* (refer to Support Paper No. 1*) that is empowered by the Parliament to assess risk, develop strategic policy, assist in biosecurity research as well as maintain biosecurity awareness to mitigate the risk of Phylloxera and other pests and diseases entering and establishing in South Australia.

The above concerns have been reviewed by the Board through adoption of a best practice risk management process (Support Paper No. 2*) consistent with the approach described in AS/NZS ISO 31000-2009. It is the primary objective of PGIBSA to ensure that South Australia retains the highest level of protection against Phylloxera infestation and strongly believes that the risk assessment process has enhanced our level of confidence as to what proposes the greatest risk of a potential Phylloxera incursion. Moreover, it has assisted in identifying areas that the PGIBSA needs to focus on to ensure the State's level of protection is maintained into the future.

The PGIBSA is now seeking endorsement from industry stakeholders on the proposed actions to address the risks of highest concern.

Following this consultation the Board will formally provide its advice to the Minister for Agriculture, Food and Fisheries. **Stakeholders are invited to make a written submission to the Board either directly or through their regional or State body by the 16th October 2012.**

* Support papers are available at www.phylloxera.com.au



Risk Assessment Process

The Board has undertaken a risk assessment process using the principles of the international standard AS/NZS ISO 31000-2009 Risk Management Tool (refer to Support Paper No. 2*).

As part of this process, the Board reviewed:

1. The biology of Phylloxera (Support Paper No. 3*)
2. Potential risks associated with National Phylloxera Management Protocol (Support Paper No. 4*)
3. All available documentation that led to the formation of the National Phylloxera Management Protocol
4. The minutes of both the Phylloxera Technical Reference Group (PTRG) and the National Vine Health Steering Committee (NVHSC) – the body charged with the endorsement of the National Phylloxera Management Protocol based on recommendations of the PTRG
5. The role of Biosecurity SA and the South Australian Plant Quarantine Standard (Support Paper No. 5*)



A total of 262 risks were identified as potential pathways for Phylloxera establishing in South Australia, with 10 posing the greatest threats.

The analysis of risk by the Board in workshops is best described in three parts as follows:

Part 1 – Risks quantified on the premise that no mechanisms are in place to manage the risk ('untreated' risks)

1. Quantifying the likelihood of Phylloxera establishing and/or spreading for each of the risks
2. Quantifying the consequence of each of the risks on the assumption Phylloxera establishes in South Australia
3. Determining the quantum of each 'untreated' risk, based on the pooled likelihood and consequence rating.

Part 2 – Risk quantified on the real situation of all current mechanisms (treatments) that are in place to manage the risks

4. Re-quantifying the likelihood of Phylloxera establishing and/or spreading for each of the risks after 'treatments' have been applied
5. Re-quantifying the consequences of each of the risks on the assumption Phylloxera establishing in new locations after controls have been applied
6. Determining the quantum of each risk, after the current treatments are taken into account, based on the revised likelihood and consequence risk rating.

Part 3 – Prioritising risks

7. Identifying additional treatments (risk management practices) for risks with a medium to very-high risk rating
8. Identifying the risks that may require further action i.e. the risks with an unacceptable rating after all practical 'treatments' are in place
9. Identifying what, if any, further actions are to be considered.

Treatments or 'risk management strategies' include regulatory requirements which are based on practices outlined in the National Phylloxera Management Protocol and also standard industry practices that manage the risk of the movement of Phylloxera.

Regulatory treatments include aspects as the following:

- Zones e.g. PEZ (Phylloxera Exclusion Zones), PRZ (Phylloxera Risk Zones), PIZ (Phylloxera Infested Zones) with regulations related to their risks
- Evidence based treatments such as heat sheds, hot water bin dipping and heat treatment of vine cuttings
- Wash down facilities
- Prohibited movement of fruit.

Industry practices including actions such as:

- Applying on-farm biosecurity practices, e.g. footbaths, movement restrictions, vineyard sign-in procedures, designated vehicle parking away from vineyards, record keeping of planting material, use of accredited nurseries and ensuring knowledge as to where contractors and industry personnel have previously been.

TREATMENTS

General Results of the Risk Assessment

Overall, the Board has found that the majority of the risks and pathways for entry of Phylloxera in to South Australia are addressed well by current policies and industry practices. This is not unexpected since the Board in various forms has been examining these risks and conducting a program of risk mitigation for many years. However, this process of risk assessment is believed to be the most comprehensive and wide ranging examination thus far of potential threats to South Australia's Phylloxera free status, and has revealed several opportunities for further improvements which are discussed later in this paper.

What the Board has found in respect to each of the industry concerns

Concern 1

The surveying method used to determine a status upgrade from a Phylloxera Restricted Zone (PRZ) to a Phylloxera Exclusion Zone (PEZ) is not adequate and could result in the establishment of Phylloxera in South Australia.

The Board reviewed the evidence, history and the surveying practice (agreed national protocol). The surveying method has been in practice for at least 13 years. In that time there have been no detections of Phylloxera in any of the regions that have been surveyed and have subsequently attained PEZ (Phylloxera Exclusion Zone) status. The survey method was successful in finding Phylloxera in a Phylloxera Restricted Zone (PRZ) at Mansfield, in 2010. The surveying method requires every vineyard in a surveyed zone to be inspected. All vineyard owners are required to undertake a written questionnaire seeking information on where planting material has come from, the movement of machinery and people on and off the property and where fruit was sold. Following an assessment of the details recorded, the vineyard is then ground truthed by a trained survey team by an inspection of the vineyard perimeter, and any visible sites of low vigour and then a systematic ground truthing of vines in every 5th panel 3rd row where the roots are inspected. Depending on the results from the questionnaires, the vineyard will be surveyed twice over 3 years or every year. All growers are required to undertake an awareness program on best practice biosecurity practices such as machinery and people management and control of the public entering the vineyards.

This risk rating for the survey method was found to be **LOW**.

Concern 2

The proximity of a Phylloxera Exclusion Zone (PEZ) to a Phylloxera Infested Zone (PIZ) creates a higher risk to Phylloxera establishing in South Australia.

The Board reviewed the evidence, conducted a review of the regulatory practices, interviewed growers in the Nagambie PIZ and the Heathcote/Bendigo GI (part of the Western PEZ) and has found no breach of the regulatory requirements (based on the industry endorsed National Phylloxera Management Protocol) in place. Evidence gathered has identified that growers in both zones have a high level of awareness and professionalism in their approach to the management of vectors known to assist in the movement of Phylloxera.

The Board's risk assessment determined that the risk relating to proximity is **LOW**.

Concern 3

That machinery moving from a newly endorsed PEZ into South Australia increases the risk of Phylloxera establishing.

Biosecurity SA undertook to align the Plant Quarantine Standards with the National Phylloxera Management Protocol. The risk assessment found that the risk of Phylloxera establishing in South Australia due to machinery movements was **LOW** under the Plant Quarantine Standards prior to November 2011, and remained **LOW** with subsequent change in the Plant Quarantine Standards for South Australia (Support Paper No. 5).

Concern 4

The movement of grapes from a newly endorsed PEZ into South Australia can result in Phylloxera establishing in South Australia.

Businesses sending grapes (from a PEZ) to a winery interstate (in a PEZ) can only do so in compliance with that State's quarantine regulations, that is verified by a Plant Health Certificate issued by the regulator in the exporting State, or a Plant Health Assurance Certificate, issued by a business accredited under the national Interstate Certification Assurance (ICA) program. All States and Territories have signed up to the national ICA arrangements. These arrangements represent a co-regulatory approach where the arrangements are based on quality assurance and HACCP (Hazard Analysis Critical Control Point). A winegrape grower accredited under ICA-33 is locked into a legal agreement which requires that all staff involved are trained, bins are cleaned of soil and plant material, loads are covered, the transport vehicle is externally cleaned free of soil and plant material prior to leaving the vineyard and travel is by the most direct route. The transporter must have effective means of communication, a spillage management plan, a plan of the most direct route to the receiving winery and the original plant health assurance certificate. The receiving winery must process the grapes within 24 hours, take all possible measures to avoid spillage of grapes and spilled grapes must be disposed of or destroyed in a secure manner. The wine grape consignment must remain covered until processing at the winery. The winery must have a dedicated unloading area and should have a hard surface with wash down cleaning facilities and drainage to a safe area to prevent run off into nearby vineyards. The accredited businesses are audited by the regulator to verify compliance with the ICA protocol.

The Board reviewed the evidence of grape movement. The Board noted that grapes, under the SA Plant Quarantine Standards, have been able to move from interstate Phylloxera Exclusion Zones into South Australia since 1998. There is no evidence that the movement of grapes has resulted in Phylloxera establishing in a PEZ interstate or in South Australia.

The Risk Assessment indicated that the risk of Phylloxera establishing due to the movement of grapes from a newly gazetted PEZ into South Australia was **LOW**.

Concern 5

That by changing the SA Plant Quarantine Standards to align with the National Phylloxera Management Protocol the risk of Phylloxera establishing in South Australia increases.

The Minister for Agriculture, Food and Fisheries has asked the Board to comment on the changes to entry conditions contained in the Plant Quarantine Standard associated with Phylloxera. The Board, in its deliberations, after assessing 262 risks associated with the potential for Phylloxera to establish in South Australia, has found no increased level of risk with the changes that were made to the Plant Quarantine Standard for South Australia in October 2011.

The assessed risk of Phylloxera establishing in South Australia in respect to the Plant Quarantine Standards for South Australia both before and after the changes remained **LOW**.

Other Opportunities to Manage Risks

Through the process of identifying and assessing 262 risks, the Board has identified 10 of these risks as having the potential to be a **HIGH** to **VERY HIGH** risk for Phylloxera to establish.

The PGIBSA seeks to address these key issues as an imperative and proposes the following strategies to reduce the level of risk of Phylloxera establishing in South Australian vineyards.

1. The risk of Phylloxera establishing in South Australia as a result of practices by unaccredited nursery operators and importers.

The Board identified that nursery operators that are either not affiliated or accredited posed a **VERY HIGH** risk in respect to the movement of Phylloxera. It is acknowledged that the easiest way for Phylloxera to establish is through infected plant material. If a nursery is unaccredited then the likelihood of compliance with Plant Quarantine Standards is considered to be reduced.

PROPOSED ACTION: The Board promotes the use of only accredited nurseries and/or those that demonstrate the use of Hot Water Treatment for cuttings and rootlings in accordance with the requirements of the National Phylloxera Management Protocol. The Board will continue to support the Victorian Department of Primary Industries in ensuring awareness of Victorian regulations on restriction of movement of propagation material from PIZs and PRZs into a PEZ.

2. The risk of Phylloxera establishing in South Australia as a result of the lack of effective national collaborative industry structures.

The Board identified that without an effective industry structure in place to maintain an ongoing review of the protocol and ensure consistency of national Phylloxera management strategies, there is a **VERY HIGH** risk of Phylloxera establishing. Communication and continuity are essential elements of managing this risk.

PROPOSED ACTION: The Board will take a stronger leadership role and assist in steering the agenda of the National Vine Biosecurity Committee to deliver leadership in the field of Phylloxera Protocol management and expertise.

3. The risk of Phylloxera establishing in South Australia as a result of a reduction in staff and operational knowledge in the industry across all zones (PIZ, PRZ and PEZ).

The Board identified there are extensive resources available to the industry such as those through the PGIBSA website and awareness programs conducted by Biosecurity SA and Department of Primary Industries Victoria. However, the PGIBSA is mindful of the changes in personnel the industry is currently experiencing and the impact this may have on industry knowledge as people exit the industry. The Board has assessed this risk as **HIGH**.

PROPOSED ACTION: The Board will work collaboratively with industry stakeholders so that all industry stakeholders can access up-to-date information in a timely and efficient way. The Board seeks to expand upon its communication offerings and plans to explore smartphone/tablet apps, social media and online training programs and workshops.

4. The risk of Phylloxera establishing in South Australia due to the decline of economic returns within the industry.

The Board recognises that biosecurity practices are potentially under threat due to the impact of declining farm gate income within the industry.

This has a potential impact on best practice and knowledge management for the industry. The Board has assessed this risk as **HIGH**.

PROPOSED ACTION: The Board will take a lead role in developing innovative strategies that focus on timely education and skill development in the field of Phylloxera Management and Biosecurity.

5. The risk of Phylloxera establishing in South Australia due to non-reporting of incidents across all zones (PEZs, PRZs & PIZs).

The Board assessed the risk that Phylloxera establishes in South Australia due to the non-reporting of incidents across all zones, irrespective of their status as **HIGH**. Even though there are substantial penalties for not reporting infestations, the encouragement for the industry to report incidents needs to be supported by all stakeholders. Incidents need to be followed up with remedial treatments and investigation to understand the causes.

The Board noted that the National Phylloxera Management Protocol details the movement of people as a risk to the spread of Phylloxera, whether it is labour crews, industry personnel, or the public (Procedure H).

PROPOSED ACTION: The Board will work through the National Vine Biosecurity Committee to establish a national approach to industry awareness and the obligation to report incidents of potential plant pest incursions such as Phylloxera.

6. The risk of a Phylloxera infestation being established by regulatory error (confusion by regulatory staff) between States and/or zones.

The Board noted that there have been examples of incorrect information provided by State regulators to industry members, especially in respect to the movement of machinery. This is likely as a result of changing personnel, departmental restructures and changes to regulatory standards over time. The Board has identified this risk as **HIGH**.

PROPOSED ACTION: When these situations occur, the PGIBSA will provide feedback to the respective regulator as well as undertake ongoing awareness programs for regulators. The PGIBSA will recommend a change to the NPMP PEZ to PEZ protocols to include proof that machinery/equipment has been in a PEZ for 2 weeks as part of the Plant Health Certificate to provide additional protection for accidental and unintended noncompliance. Scientific evidence shows that Phylloxera in all its lifecycle forms can live for up to 8 days without feeding.

7. The risk of a Phylloxera infestation being established due to inconsistency in regulations and communications between a PIZ and a PEZ.

The Board noted from its investigations that a major risk factor for non-compliance is the use of different language by regulators across Australia. In a recent incident there was an approval given to move a harvester into SA without a Plant Health Certificate by regulators in another State. The Board recognises that the language used by all State regulators needs to be clear and simple to ensure that it is clearly understood by all industry stakeholders and demonstrates consistency between States. The Board has assessed the risk as **HIGH**.

PROPOSED ACTION: The Board supports a consistent approach to language by the individual State Domestic Quarantine regulators by the adoption of the National Phylloxera Management Protocol, and will actively promote this approach through the National Vine Biosecurity Committee and the Domestic Quarantine Group.

8. The risk of a Phylloxera infestation being established due to non-compliance, ignorance and disregard of regulations between a Phylloxera Infested Zone (PIZ) and a Phylloxera Exclusion Zone (PEZ) (illegal and accidental behaviour).

The Board noted that the National Phylloxera Management Protocol does not take into consideration the potential risk associated with accidental or illegal behaviour. The Board acknowledges that regardless of the best regulatory processes in place, there is always a potential for breaches. The Board has assessed the risk in this instance as **HIGH**.

PROPOSED ACTION: The PGIBSA will seek a change to the National Phylloxera Management Protocol for the movement of machinery between a PEZ to another PEZ be revised to include a requirement that demonstrates that machinery has been in a PEZ for 2 weeks before it can move to another PEZ. Secondly, the Board has identified that the best level of biosecurity protection is at the farm gate by having in place best practice procedures. The Board will assist with further development of those procedures and when complete, will communicate those modifications with its stakeholders.

9. The risk of a Phylloxera infestation being established due to non-compliance, ignorance and disregard of regulations between a Phylloxera Infested Zone (PIZ) and a Phylloxera Restricted Zone (PRZ) (illegal and accidental behaviour).

The Board noted that the National Phylloxera Management Protocol does not take into consideration the potential risk associated with the

accidental or illegal behaviour. The Board acknowledges that regardless of the best regulatory processes in place, there is always a potential for breaches. The Board has assessed the risk in this instance as **HIGH**.

PROPOSED ACTION: The Board has identified that the best level of biosecurity protection is at the farm gate by having in place best practice procedures. The Board will assist with the further development of those procedures and when complete communicate those modifications with its stakeholders.

10. The risk of a Phylloxera infestation being established due to non-compliance, ignorance and disregard of regulations between a PRZ and a PEZ (illegal and accidental behaviour).

The Board noted that the National Phylloxera Management Protocol does not take into consideration the potential risk associated with the accidental or illegal behaviour. The Board acknowledges that regardless of the best regulatory processes in place, there is always a potential for breaches. The Board has assessed the risk in this instance as **HIGH**.

PROPOSED ACTION: The PGIBSA will recommend that the National Phylloxera Management Protocol be reviewed to take into account the risk associated with accidental or illegal behaviour. Secondly, the Board has identified that the best level of biosecurity protection is at the farm gate by having in place best practice procedures. The Board will assist with further development of those procedures and when complete, will communicate those modifications with its stakeholders through the National Vine Biosecurity Committee.

Where to from here?

The PGIBSA is now seeking endorsement from industry stakeholders on the proposed actions to address these 10 risks of highest concern.

The PGIBSA proposes to recommend to the Minister for Agriculture, Food and Fisheries that the Plant Quarantine Standards remain as they are now proclaimed as at July 2012.

Written submission from stakeholders can either be by individuals or they can provide input to submissions lodged by their regional or State organisations (WGCSA or SAWIA) following a series of regional meetings to discuss the paper.

Closing date for submissions is COB 16th October 2012.

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