

# Phylloxera Risk Management

Phylloxera and Grape Industry Board of SA

Support Paper No. 2:

## What is Risk Management?



Risk is defined in terms of the effect of uncertainty on objectives and risk management as a process that is integrated into an organisation through a continuous improvement framework.

Well managed organisations of all sizes try to anticipate uncertainty in their businesses and in their operations and take action to reduce uncertainty to a tolerable level. Risk management improves the probability of success in pursuing business objectives whether that success be measured in financial, social or other relevant terms. Public sector and industry organisations with objectives to deliver protection or security, including biosecurity are wholly focused on risk management.

Australia has adopted the risk management standard AS/NZS ISO 31000:2009 "Risk management – Principles and guidelines" based on a similar international standard which sets out definitions and guidelines for risk assessment.

Risk is defined in terms of the effect of uncertainty on objectives and risk management as a process that is integrated into an organisation through a continuous improvement framework. It is accepted that all risks may not be able to be managed to an optimal level and that improvements in risk management may be possible with changing knowledge and circumstances.

This standard for risk management is highly relevant to the functions and operations of the PGIBSA since its existence is based on the need to identify threats to the SA Grape Industry and to take steps to reduce the chances of the industry experiencing catastrophic incursions of pests and diseases, including Phylloxera.

In the process of risk management, risks are identified, assessed and prioritized so that coordinated and economical application of resources can be achieved to minimize, monitor and control the likelihood and/or consequences of unfortunate events. Resources need to be applied to the highest priority risks for maximum effect and not spread thinly and ineffectively over every possible real or imagined risk.

When considering the risk of Phylloxera establishing in South Australia, there are several factors that need to be taken into consideration. These include the international arrangements that Australian and State Governments have entered into in respect to world trade and the constitutional right to free trade between the States. In essence, biosecurity risk cannot be legally managed in any way that restricts trade unless there exists a sound, internationally defensible scientific basis and logic for quarantine barriers to be put in place.

Quarantine policies need to be continually reviewed in the light of new knowledge and technology that can be applied to manage risks, or to address increasing likelihood of incursions resulting from changes in community and industry practices, markets or even climate change.

By adopting a standard process of risk assessment and management, the PGIBSA has established a framework for ongoing risk assessment supported by science and transparent logic, has comprehensively recorded an exhaustive analysis of risks which can be reviewed regularly, has established a tracking system for its decisions so that future members of the Board can follow the evolution of policy over time and provided a basis for business continuity in the event of significant turnover of staff or board membership.



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

**Phylloxera and Grape Industry Board of South Australia**  
46 Nelson St, Stepney SA 5069

P: 08 8362 0488

F: 08 8362 0499

M: 0428 260 430

E: [admin@phylloxera.com.au](mailto:admin@phylloxera.com.au)

W: [www.phylloxera.com.au](http://www.phylloxera.com.au)

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**In reflecting on the risks to South Australia of Phylloxera establishing there are several assumptions which the Board is often dealing with which need to be challenged at all levels in the industry.**

1. **Prohibition eliminates risk?** History does not support this assertion and if it were true, there would be no need for the PGIBSA.
2. **Everyone follows the protocols?** Deliberately or not, examples of breaches are readily recounted by industry members.
3. **Regulation by government eliminates risk?** Only ever attempted in a totalitarian regime and doomed to failure. Even after every reasonable action is taken, residual risk invariably remains.
4. **Everyone tries to co-operate?** In a perfect world perhaps but staff turnover, ignorance and financial pressure can be sufficient for breaches to happen.
5. **Roadblock checks ensure no risk?** There are only 5 full and part time roadblocks into SA and more than 15 routes into the state.
6. **All risks are covered by the protocols and the Plant Quarantine Standards?** The Board has in its recent assessment identified holes in the protocols and risks that are not within scope of government regulations.

The major components of the risk assessment tool are the establishment of criteria to determine a likelihood of Phylloxera establishing in South Australia and to rate the consequences including considering the extent of a Phylloxera infestation.

**For this risk assessment the following scales were used to assess the risks.**

| Rating | Description    | Likelihood of introduction to SA            |
|--------|----------------|---|
| 1      | Rare           | May occur only in exceptional circumstances |
| 2      | Unlikely       | Could occur at some time                    |
| 3      | Possible       | Might occur at some time                    |
| 4      | Likely         | Will probably occur in most circumstances   |
| 5      | Almost certain | Is expected to occur in most circumstances  |

| Rating | Description   | Consequence of introduction to SA   |
|--------|---------------|---|
| 1      | Insignificant | Very unlikely to get to a vineyard if carried                                 |
| 2      | Minor         | Introduction to a vineyard with a low chance of infection                     |
| 3      | Moderate      | Possible carriage to a vineyard and a chance of successful district infection |
| 4      | Major         | Likely carriage to a vineyard and high chance of regional infection           |
| 5      | Catastrophic  | Highly likely to infect a vineyard and be spread Statewide.                   |

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Quarantine policies need to be continually reviewed in the light of new knowledge and technology that can be applied to manage risks, or to address increasing likelihood of incursions resulting from changes in community and industry practices, markets or even climate change.



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### Risk Assessment Steps

1. Risk assessment begins with a sound understanding of the biology and ecology of the pest (Phylloxera), including how it is detected, its vulnerabilities, movement and life cycle stages etc.
2. Rating scales for likelihood and consequences are debated and settled so that risks can be rated.
3. The risks based on insect stage, vector and pathway for movement are identified and scored against the scales for likelihood and consequences.
4. By combining the likelihood and consequences ratings, the risks are prioritized from low to very high.
5. The current treatments that are already in place to reduce the risk are considered and the ratings adjusted to take those actions into account. The remaining risk is the residual risk after treatments have been applied. This step provides information on how well the risk is currently being managed.
6. If the residual risk is still too high then new actions/treatments are proposed to reduce the risk to a tolerable level. For example, new or amended protocols may be needed and these may be enshrined in standards or be proposed as industry codes and practices.
7. Because industry and government circumstances and knowledge changes over time, the risk assessment process needs to be reviewed regularly with the Board reaffirming, amending and implementing risk treatments as necessary.

**With the completion of this risk assessment using the guidelines of the Australian Standard, the Board is well positioned to monitor its risk management strategies and review and update policies as necessary to provide a high standard of biosecurity leadership for the grape industry in SA.**

### Reference

*South Australian Government: Plant Health Act (2009)*

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W: [www.phylloxera.com.au](http://www.phylloxera.com.au)