Grapevine Phylloxera Management Policy for Victoria

Economic Development,
Jobs, Transport
and Resources

AGRICULTURE VICTORIA

Contents

Accessibility

If you would like to receive this publication in an accessible format, please telephone Agriculture Victoria, Biosecurity Branch on 136 186 or customer.service@ecodev.vic.gov.au.

This document is also available in PDF format at www.agriculture.vic.gov.au.

1. AUTHORISATION

Title	Grapevine Phylloxera *(Daktulosphaira vitifoliae*, Fitch) Management Policy for Victoria
Issuing Division/ Branch	Chief Plant Health Officer (CPHO), Biosecurity Branch
Date Effective	14 June 2017
Enquiries	Gary D'Arcy
Contact	market.access@ecodev.vic.gov.au
Approved by	Dr. Gabrielle Vivian Smith CPHO

2. INTRODUCTION

This document outlines the key policy principles underpinning the management of grapevine phylloxera in Victoria by industry and Agriculture Victoria.

3. POLICY STATEMENT

Agriculture Victoria will at state and national levels support the establishment of cost-effective, collaborative arrangements with affected parties (including state and commonwealth jurisdictions, industry, and community groups) to minimise the risks of and potential impacts of grapevine phylloxera by encouraging solutions to sustain, restore or enhance market access.

Agriculture Victoria is the lead agency responsible for plant biosecurity programs including emergency response, domestic quarantine, provision of area freedom, and certification of host material and equipment for phylloxera. Agriculture Victoria administers the Plant Biosecurity Act 2010 and Plant Biosecurity Regulations 2016, which support the development and implementation of appropriate policies underpinning the management of phylloxera in the state.

Phylloxera is declared as a pest under section 5(1) of the Plant Biosecurity Act 2010, enabling Agriculture Victoria to manage phylloxera in accordance with the requirements of the National Phylloxera Management Protocol (2009) (NPMP). The NPMP was developed by the National Vine Health Steering Committee as a basis for providing a consistent and technically justified approach to the implementation of host material movement controls and management of production regions of different phylloxera status. Please use the link below to access the NPMP.

http://www.vinehealth.com.au/media/National-Phylloxera-Management-Protocol.pdf

This policy is supported by the following legislation:

- Plant Biosecurity Act 2010
- Plant Biosecurity Regulations 2016
- Governor in Council Orders

Phylloxera is managed in Victoria by delineating grape growing regions based on pest status:

Phylloxera Exclusion Zone (PEZ): an area that has been surveyed for phylloxera and found free of the pest.

Phylloxera Risk Zone (PRZ): an area that has not been surveyed for phylloxera, and is therefore of unknown status; and

Phylloxera Infested Zone (PIZ): an area that is known to be phylloxera infested.

A map and explanation of the phylloxera zones for eastern Australia is shown on the Vinehealth Australia website

http://www.phylloxera.com.au/resources/maps.

4. SCOPE

This policy applies to industry growers, processors, contract service providers and government agencies impacted by phylloxera. This policy has been developed to clarify the roles and responsibilities of those managing the impacts of the pest.

5. REQUIREMENTS

This policy statement identifies:

1. the roles and responsibilities of all stakeholders engaged in the management of phylloxera; and
2. relevant legislation and standards that underpin phylloxera management in Victoria.

6. PHYLLOXERA BIOLOGY

Grapevine phylloxera is the only insect in the Order Hemiptera that lives and feeds on grapevines (*Vitis* species). The life cycle of the pest involves egg, nymphal and adult stages. The pest can occur as root-feeding and leaf-feeding forms however, in Australia, the leaf-feeding forms are less common (Powell et al., 2013) and have only been seen in north east Victoria. The root feeding form, called radicicolae, feed on the roots of the grapevine by sucking sap from the root cells, which causes galls to form at the damaged feeding sites. The radicicolae reproduce asexually to rapidly produce several generations in a growing season. Population growth and risk of spread are largely influenced by factors relating to genetic strain and the host plant variety (Powell et al., 2013). Soil temperature and moisture can impact population growth of a particular strain. Victoria has 83 strains of phylloxera, and the most virulent strains can kill grapevines within 5 years.

7. PHYLLOXERA RISKS

Phylloxera can move if:

- host material is moved from a PIZ to a PRZ, or PEZ without appropriate treatment and certification;
- growers do not apply appropriate on farm biosecurity protocols to restrict the entry of host material entering their properties;
- growers do not recognise phylloxera symptoms and report suspect phylloxera to Agriculture Victoria for investigation.

8. ROLES AND RESPONSIBILITIES

Irrespective of a region's phylloxera status, there are a range of shared roles associated with the pest's management, which are briefly described below.

8.1 Government

Through the Chief Plant Health Officer's (CPHO) Unit, Agriculture Victoria is responsible for the delivery of the state phytosanitary program. This includes surveillance and response to new detections, provision of diagnostic services, market access arrangements and communication of regulatory requirements and training. The CPHO unit is also responsible for alerting all stakeholders to phylloxera detections.

8.2 Industry

Industry is responsible for supporting the Victorian Viticulture Biosecurity Committee (VVBC) as the policy forum for providing leadership and planning on biosecurity issues. They also play a key role raising awareness of phylloxera and best management practice.

8.3 Growers

Growers are responsible for implementing on farm biosecurity management strategies. Grower responsibilities include, but are not limited to, strategies focused on preventing the pest entering their property on vine material, contract labour, used

farm machinery, and visitors. Growers are also responsible for reporting any suspected phylloxera infestations to Agriculture Victoria.

8.4 Contract service providers

Contract service providers play a critical role in the management of phylloxera. Their primary role is to prevent the introduction of phylloxera onto a property that they have been contracted to work on. This is achieved through adopting hygiene procedures aimed at preventing the movement of phylloxera on machinery, bins, and their staff. Contract service providers should also ensure they are aware of, and comply with the relevant statutory responsibilities associated with the movement of phylloxera host material into and out of phylloxera management zones (i.e. PIZ and PEZ).

8.5 Fruit processors

Fruit processors, transporters, and their workers/contractors play an essential role in ensuring that phylloxera is not introduced onto grower's properties through unclean trucks, clothing, bins and grape marc. Processors should also ensure staff adopt appropriate hygiene measures when attending grower's properties.

8.6 Shared responsibilities

Training is a shared responsibility depending on the competencies being attained. Agriculture Victoria is responsible for ensuring that departmental officers are trained in administering relevant Interstate Certification Assurance (ICA) arrangements, regulatory procedures, and phylloxera detection activities. These detection activities include hygiene protocols involved in phylloxera sample collection.

Industry members are responsible for ensuring vineyard staff are trained in identifying signs/symptoms of phylloxera in order to report suspected phylloxera infestations to Agriculture Victoria.

8.7 Stakeholder awareness

Stakeholder awareness is a shared responsibility that is focused on the delivery of a range of strategies implemented to communicate the importance of phylloxera management to industry. These roles are briefly described below:

Government role – to inform affected stakeholders of their statutory responsibilities regarding reporting of suspect detections and the requirements for moving phylloxera host material within and into the state.

Industry role – to raise awareness of the importance of phylloxera to industry and to promote broad adoption of good on farm biosecurity practices.

Grower role – to promote phylloxera awareness and communicate biosecurity requirements and the risk pathways for phylloxera to staff, workers, and contractors attending their property.

8.8 Market access

Interstate and intrastate movement protocols adopted by all states and territories are largely consistent with the NPMP. It remains the responsibility of the grower or consignor to comply with these requirements and for Agriculture Victoria to ensure that the necessary certification services are available to enable compliance.

8.9 Surveillance

It is the role of all stakeholders to implement surveillance strategies to allow industry and Agriculture Victoria to make informed management decisions. The NPMP describes surveillance requirements for establishing the phytosanitary status of a region including protocols used in phylloxera rezoning projects.

8.10 Reporting of suspect detections and compliance

Phylloxera is declared as a notifiable pest under section 17 of the Plant Biosecurity Act 2010. Accordingly, industry members have a legal responsibility to report suspect detections to Agriculture Victoria, who in turn must report changes in Victoria's phylloxera status to all states and territories.

Growers and industry will:

1. Report any suspect phylloxera signs/infestations to Agriculture Victoria within seven days of observation by contacting 136 186 or emailing market.access@ecodev.vic.gov.au.

Agriculture Victoria will upon receipt of this information:

1. Notify internal stakeholders to the suspect detection of phylloxera;
2. Actions for suspect detection within PIZ:
    a. Contact the property owner/manager within seven working days of receiving the notification;
    b. Depending on the time of year and where required, arrange for a confirmatory sample to be collected from the affected vines:
        i. December to April: within 14 working days or as agreed with the property owner/manager; or
        ii. May to November: in accordance with technical advice.
3. Actions for suspect detection within PRZ/PEZ:
    a. Contact the property owner/manager as soon as practicable;
    b. Arrange for a confirmatory sample to be collected from the affected vines as soon as practicable.
4. Samples will be forwarded to an Agriculture Victoria approved diagnostic laboratory for testing within one working day of sample collection (preferably on day of collection).
5. Notify property owner/manager of diagnostic results.

8.11 Diagnostics

The identification of phylloxera samples is the responsibility of Crop Health Services (CHS), who are the approved provider of diagnostics services to Agriculture Victoria.

8.12 Research and development (R&D)

Collaborative R&D supporting best management practice and improved options for phylloxera management and detection is a shared responsibility with industry, Agriculture Victoria and research organisations.

8.13 Detection management and reporting

Responding to a new phylloxera detection is an Agriculture Victoria responsibility. The following will be implemented in response to a new phylloxera detection:

1. Collection of a confirmatory sample (refer section 8.10);
2. Final diagnosis through CHS (refer section 8.11); and
3. Implementation of further action in accordance with which phylloxera zone the new detection is located within (e.g. PEZ/PRZ or PIZ).

Actions where confirmed detection is located within a PEZ or PRZ

1. Within 48 hours of confirmed detection:
    a. Issue Infested Land Notice on affected property;
    b. Establish draft boundaries of the new Phylloxera Infested Zone;
    c. Advise local industry association and other key stakeholders of the detection and confirm new operating responsibilities;
    d. Advise interstate biosecurity agencies through the Subcommittee for Domestic Quarantine and Market Access of the new detection, and the upcoming PIZ boundaries.
2. Within 5 working days of confirmed detection:
    a. Initiate the development of an Order declaring a Phylloxera Infested Zone;
    b. Initiate the development of new phylloxera zone maps;
3. Within 10 working days of confirmed detection
    a. Identify and contact newly affected vineyard owners
4. Within 1-5 days of new Control Area gazettal:
    a. Provide new PIZ maps to stakeholders;

b. Confirm required phylloxera Control Area signage.

NOTE: Governor in Council Orders take approximately 6 – 12 weeks to make.

Actions where confirmed detection is located within a PIZ

1. Within 48 hours of confirmed detection:
    a. Establish the location of the new detection in context with the boundaries of the existing PIZ;
    b. Where the new detection is more than 5km from the boundary of the existing PIZ, then no further action is required; or
    c. Where the new detection is within 5km of the existing PIZ boundary, then the following will occur:
2. Within 48 hours of confirmed detection:
    a. Advise local industry association and other key stakeholders of the detection and confirm new operating responsibilities;
    b. Advise interstate biosecurity agencies through the Subcommittee for Domestic Quarantine and Market Access of the new detection, and upcoming expansion of the PIZ boundaries;
3. Within 5 working days of detection:
    a. Identify newly affected vineyard owners of the confirmed detection;
    b. Initiate the amendment of the Order declaring Phylloxera Infested Zones within 5 working days of confirmed detection;
    c. Identify newly affected vineyard owners;
4. Within 5 days of gazettal:
    a. Contact newly affected vineyard owners;
    b. Confirm required phylloxera signage;
    c. Provide new PIZ maps to stakeholders;

NOTE: Governor in Council Orders take approximately 6 – 12 weeks to make.

9. PROCEDURES

To provide growers with a cost-effective option for complying with phylloxera requirements, Agriculture Victoria provides Interstate Certification Assurance (ICA) accreditations to facilitate intra and interstate movement of phylloxera host material and used agricultural equipment. The ICA program is a quality assurance based program, which acknowledges and formalises industry's role in achieving biosecurity outcomes.

Use this link to access ICA information: http://www.interstatequarantine.org.au/producers.

The table below indicates protocols and procedures relevant to viticulture.

Name of Protocol	Protocol application
ICA-20	Pre-harvest Treatment and Inspection of Table Grapes (Queensland fruit fly [QFF])
ICA-22	Transfer and Processing of Grape Must and Juice
ICA-23	Area or Property Freedom
ICA-33	Movement of Wine Grapes (phylloxera & QFF)
ICA-37	Hot water treatment of Grapevines

10. REFERENCES

Powell, K.S., Cooper, P.D., Forneck, A. (2013). The biology, physiology and host–plant interactions of grape phylloxera *Daktulosphaira vitifoliae.* Pp. 159-218 *in* S.N. Johnson, I. Hiltpold, and T.C.J. Turlings, eds. Advances in Insect Physiology Volume 45. Oxford: Academic Press.

Last Reviewed	14 June 2017
Next Review	5 April 2018
Version No.	6.8
Enquiries	market.access@ecodev.vic.gov.au

Summary of amendments to latest version:

Version 6.7: General review and adoption of new template; expansion of training section and addition of expected time frames or response to detections and explanation of process, including specifying PIZ and PRZ/PEZ detections; expansion of Detection Management (8.13); update link to ICA information (9).

Version 6.8: General review, formatting and rewording (3, 4, 8.1, 8.4, 8.10, 8.11, 8.12, 8.13); addition of References section (10); update legislation reference to section 5(1) of Plant Biosecurity Act 2010 (3); update references to Plant Biosecurity Regulations 2016 (3); addition of time frames for Governor in Council Orders (8.13); addition of requirement to advise interstate biosecurity agencies of new detection (8.13); modification to time frames associated with specific actions (8.13).