



Vineyard biosecurity plan

It's your asset
- protect it!



CATCH IT. SNAP IT. REPORT IT.


Call the Biosecurity New Zealand pest and disease hotline **0800 80 99 66**



MOST unwanted

2020


BIOSECURITY IN THE VINEYARD : BACTERIA 🦠 FUNGI 🍄 INSECT 🐛 PHYTOPLASMA 🦠

 **Brown Marmorated Stink Bug**

Halyomorpha halys




The number one biosecurity risk to the wine industry. Hitchhiking insect pest with high likelihood of entry into New Zealand. Feeding damages fruit, encourages bunches to fall and encourages fungal growth. Emits a foul-smelling odour similar to rotten coriander or sweaty socks when threatened, which can taint grape juice at harvest. Never been eradicated anywhere in the world.

 **Pierce's Disease & Glassy Winged Sharpshooter**

Xylella fastidiosa & Homalodisca vitripennis



Bacterial disease which could be imported on infected plant material or insect vector. Pierce's Disease eventually blocks the xylem tissue and is fatal to infected grapevines. Symptoms include leaf scorch which is commonly confused with water stress. Glassy winged sharpshooter - a key vector currently present in the Cook Islands and Tahiti. Low risk of entry but potentially severe consequences.

 **Black Rot**

Phyllosticta ampelicida




This fungal disease attacks grapevines during hot and humid weather. Infection of the fruit is the most serious phase of the disease and may result in substantial economic loss. Infected berries first appear light or chocolate brown, but quickly turn darker brown and shrivel into hard black raisin-like bodies. The most likely import pathway is infected plant material or soil. Overseas a combination of vineyard hygiene practices and chemical control are used to manage the disease.

 **Flavescence Dorée**

'*Candidatus Phytoplasma vitis*'



A phytoplasma which could be imported through infected plant material or insect vector. Infection results in major yield reductions and reduced wine quality - meaning infected areas may no longer be viable. Limited management options available. Low likelihood of entry but severe consequences.

 **Bois Noir phytoplasma**

'*Candidatus Phytoplasma solani*'



A phytoplasma which could be imported through infected plant material or insect vector. Infection results in a reduction of both yield and wine quality. Limited management options available. Low likelihood of entry but potentially significant consequences.

 **Spotted Wing Drosophila**

Drosophila suzukii




FEMALE



MALE

An insect pest which could enter New Zealand through the import of an infected host product. Causes oviposition damage and increased rate of fungal infection. Fast rate of reproduction and lack of specific surveillance technology make eradication unlikely.

 **Spotted Lanternfly**

Lycorma delicatula



An invasive insect pest which is most likely to enter New Zealand as egg masses on imported commodities or shipping containers. Spotted lanternfly feed on grapevines and produce honeydew, leading to outbreaks of black sooty mould, vine weakening and production losses. It is a highly mobile pest and congregates in large numbers. Sensitive to contact insecticides.

 **Vine Mealybug**

Planococcus ficus



Vine mealybugs are slightly smaller than Pseudococcus mealybugs and have a soft, oval, flat, distinctly segmented body that is covered with a white, mealy wax that extends into spines. Vine mealybug can transmit grapevine leafroll-associated viruses and produce honeydew that acts as a substrate for black sooty mould. Vine mealybug could be introduced through infected plant material or vineyard machinery. Chemical and biological control tools are available to manage populations.

 **European Grapevine Moth**

Lobesia botrana



Insect pest which could be introduced through the import of infected fruit or host material. Larvae feed on flowers and ripening fruit, pulping them and exposing them to secondary infection. Relatively low risk of entry. Chemical and biological control options are available.

 **Fruit Fly**

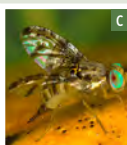
A. South American fruit fly
B. Mediterranean fruit fly
C. Natal fruit fly
D. Queensland fruit fly



A



B



C



D

An insect pest which could enter New Zealand through the import of an infected host product. Can lay eggs in ripening fruit. Larvae pulp fruit from the inside. Also increases risk of fungal infection. Risk of entry is relatively high although effective surveillance and control tools are available.

HIGHEST THREAT

SIGNIFICANT THREAT

THREAT

CATCH IT. SNAP IT. REPORT IT.



CALL THE BIOSECURITY NEW ZEALAND PEST AND DISEASE HOTLINE 0800 80 99 66



Vineyard biosecurity plan

Biosecurity is about protecting New Zealand from the risks posed by unwanted pests and diseases. All 5 million of us are part of our biosecurity system, protecting New Zealanders, our health and way of life, our natural and productive resources and our biodiversity.

Biosecurity threats could affect vineyard profitability, jobs and community. The next big threat could be here, undetected and spreading. It might already be on your doorstep. You have the power to protect your livelihood and investments. It means managing risk to prevent the introduction of unwanted organisms, preventing their spread if they do arrive, and always maintaining vigilance so they can be detected quickly.

Growers can control the entry of pests and diseases on to the vineyard by taking steps to manage the movement of people, vehicles, machinery, stock, seeds and plant material as they pass through the vineyard gate. This checklist will enable you to develop a plan to help protect your vineyard against a biosecurity incursion, and to identify an incursion quickly if it happens.

Vineyard biosecurity plans and the associated **Vineyard Biosecurity Guidelines for Best Practice** should be made available to staff, contractors and visitors.

A wide variety of interventions can be applied to improve vineyard biosecurity. Growers are strongly encouraged to discuss this template with staff and contractors and complete the biosecurity checklist for their vineyard.

The following Actions can be applied to most vineyards and give general biosecurity guidance.



ACTION 1: [click here](#)
Promote vineyard biosecurity awareness



ACTION 2: [click here](#)
Brief visitors, personnel and contractors



ACTION 3: [click here](#)
Undertake vineyard biosecurity surveillance



ACTION 4: [click here](#)
Vehicle and machinery management



ACTION 5: [click here](#)
Manage biological materials, products and supplies



ACTION 6: [click here](#)
Manage stock



ACTION 7: [click here](#)
Install and maintain wash down facilities



ACTION 8: [click here](#)
Undertake tool and equipment hygiene



ACTION 9: [click here](#)
Manage biosecurity at harvest

When you have worked your way through the actions an annual **Vineyard Biosecurity Action Plan can be completed. A template is included at the end of this document.** [click here](#)



What does a biosecurity team of 5 million look like?

EVERYONE CAN:



Take a photo of any unusual bug or disease symptom in the vineyard or environment and report it to the **Biosecurity New Zealand pest and disease hotline on 0800 80 99 66.**



Thoroughly check and clean all vehicles, machinery and tools before moving them to another property or vineyard.

Routinely unpack online purchases carefully in case any hitchhiker pests are inside.



Promote New Zealand's biosecurity rules to overseas visitors before they come to visit.

AT YOUR PLACE OF WORK, YOU CAN:

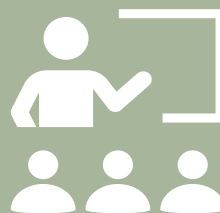


Build biosecurity requirements into contracts.

Establish a pest of the month campaign to educate staff about potential risks and what to do if anything of concern is found.



Include biosecurity as a standard item on meeting and board agendas.




Get staff trained to manage biosecurity risks encountered on the job.




Vineyard biosecurity plan


It's your asset - protect it!


 ACTION 1: Promote vineyard biosecurity awareness	YES/NO n/a
Biosecurity signage is in place at all entrance gates and includes a site contact number.	
Display biosecurity risk awareness material - Vineyard Biosecurity Guidelines for Best Practice .	
Display biosecurity risk awareness material - Most Unwanted posters.	
Display biosecurity risk awareness material - Catch it, Snap it, Report it to the Biosecurity New Zealand pest and disease hotline 0800 80 99 66 .	
The New Zealand Winegrowers Pest and Disease Identification Guide is made available for staff and contractors.	
Contractors and staff are trained, engaged and know expectations.	
Comments, actions and costs to consider and or complete:	


 ACTION 2: Brief visitors, personnel and contractors	YES/NO n/a
Visitor vehicle access is restricted to clearly designated visitor parking areas.	
Uncontrolled or little used access points are locked.	
Visitors sign in and are briefed (biosecurity, health and safety) on arrival. If required cleaning facilities or areas are accessible and supplies are provided for people to clean and inspect their clothing and footwear.	
Staff, contractors and visitors understand and observe biosecurity risk mitigation procedures.	
Comments, actions and costs to consider and or complete:	





 ACTION 3: Undertake vineyard biosecurity surveillance	YES/NO n/a
Vines and vegetation are frequently inspected for pests and diseases and results are recorded even when nothing is found (this can be done in conjunction with other vineyard tasks).	
Staff are trained and familiar with current crop pests and diseases and they know when they spot something unusual. The New Zealand Winegrowers Pest and Disease Identification Guide is easily accessible.	
Staff are familiar with the wine industry's Most Unwanted and the Vineyard Biosecurity Guidelines for Best Practice .	
Staff know how and where to report suspected exotic pests - Biosecurity New Zealand pest and disease hotline 0800 80 99 66 .	
Pest and disease management plans are developed for the vineyard.	
Where necessary, staff work collaboratively with product representatives, industry representatives, neighbours, government agencies, councils and pest control groups to reduce the spread of unwanted pests and diseases.	
Monitor buildings, structures and other likely spaces or habitat for unwanted pests and diseases.	
Comments, actions and costs to consider and or complete:	


 ACTION 4: Vehicle and machinery management	YES/NO n/a
Where possible, site vehicles are used to transport visitors and equipment around the vineyard and vehicle movements are limited to regular routes and roads throughout the vineyard.	
Records are taken of when and where machinery was last used before it enters the vineyard.	
Vehicles and machinery are clean when they arrive, or are directed to appropriate cleaning facility.	
High risk vehicles and machinery are inspected on arrival.	
Once work has been completed machinery is cleaned down before it leaves the vineyard.	
Seek assurance from your suppliers that new machinery is clean and has been treated if sourced from overseas.	
Inspect new machinery and equipment on arrival, making sure to check crevices, cracks and packing materials preferably in an enclosed space.	
Comments, actions and costs to consider and or complete:	

 ACTION 5: Manage biological materials, products and supplies	YES/NO n/a
Ensure all new vines are certified to the New Zealand Winegrowers Grafted Grapevine Standard.	
Inspect new vines for symptoms of pests and disease before planting.	
Remove amenity plantings (in or near vineyards) that are showing signs of disease.	
All products, supplies and vineyard inputs are traceable and records are kept.	
Record when and where all biological material (grape marc, compost, hay, manure, mussel shell etc) is sourced from, where it is being applied and whether it is being moved on to a subsequent site.	
Nothing is stored that might compromise vineyard biosecurity eg. other harvested fruit. Refuse entry of any material if you are concerned about biosecurity risk including plant material or soil.	
Comments, actions and costs to consider and or complete:	

 ACTION 6: Manage stock	YES/NO n/a
Make sure you know where any stock have come from and if there are any associated biosecurity risks.	
Stock are quarantined and/or drenched if appropriate.	
Check with the regulating authorities for any controls including any regional specific threats, rules and restrictions.	
Consider introducing a managed grazing plan taking into account withholding periods when stock come into contact with spray residue.	
All animals entering the vineyard are checked for pests, weeds and seeds prior to entry into the vineyard. If required initiate a wild/feral animal control programme.	
When sourcing stock, make sure the stock is not carrying any biosecurity risk for the vineyard or for stock health (eg. Chilean needle grass, footrot, TB). When stock is leaving the vineyard, ensure stock is not carrying any pests or weeds off the property and creating biosecurity issues for others.	
Comments, actions and costs to consider and or complete:	

 ACTION 7: Install and maintain wash down facilities	YES/NO n/a
The site has an appropriate cleaning/wash down facility and staff/contractors have been trained to use it.	
Cleaning/wash down facility is accessible prior to entering the vineyard headland and vines.	
The wash down facility is situated on a concrete pad and the runoff is controlled into a sump.	
High pressure hose is available. Ideally facilities should have a water blaster, steam cleaner and compressed air.	
Cleaning and wash down facility are regularly inspected, cleaned and stocked. The sump is regularly cleaned and maintained.	
Comments, actions and costs to consider and or complete:	

 ACTION 8: Undertake tool and equipment hygiene	YES/NO n/a
Tools are assigned exclusively to a property or vineyard. Tools and equipment are appropriately cleaned and sanitised before use.	
If possible where any pests and disease are present work from the least affected area to most affected area within the block or vineyard. Known areas that are affected by disease and any other suspect vines should be tagged and identified so tools can be thoroughly cleaned and sanitized after tending.	
Wash and sanitise tools and equipment prior to moving from one block or vineyard to another. Contract labour using their own tools need to clean and sanitise these prior to entering the vineyard.	
Keep cleaning equipment and supplies clean and tidy.	
Tool cleaning should be undertaken in the block being worked in or in the wash down area prior to starting a new block.	
Comments, actions and costs to consider and or complete:	

 ACTION 9: Manage biosecurity at harvest	YES/NO n/a
Make sure all machinery, tools and equipment are thoroughly cleaned between vineyard sites.	
Vineyard has a clearly defined zone for harvest traffic parking, loading and unloading that is separate from the harvest area.	
Limit the movement of people and vehicles into the harvest area and between the rows.	
All entry of people, vehicles and machinery to the harvest area is recorded.	
Harvest machinery and bins are cleaned and sanitised before use.	
Minimise soil and plant material adhering to bins during harvest.	
Clean soil and plant material off harvest machinery and bins prior to transportation to next vineyard or site.	
Comments, actions and costs to consider and or complete:	



Vineyard Biosecurity Action Plan

DATE:

<p>This plan is designed to help you prioritise actions that will improve biosecurity in your vineyard over time; all actions may not be immediately achievable but can form part of a longer term plan where necessary. It may be possible to think of alternative actions which mitigate or reduce risk in the meantime.</p>	<p>PRIORITY TIMING / COST</p>
<p>Vineyard biosecurity awareness actions</p>	<p>Priority Timing / Cost</p>
<p>Visitors personnel and contractors actions</p>	<p>Priority Timing / Cost</p>
<p>Vineyard surveillance actions</p>	<p>Priority Timing / Cost</p>
<p>Vehicles and machinery actions</p>	<p>Priority Timing / Cost</p>
<p>Biological materials, products and supplies actions</p>	<p>Priority Timing / Cost</p>
<p>Stock actions</p>	<p>Priority Timing / Cost</p>
<p>Wash down facilities actions</p>	<p>Priority Timing / Cost</p>
<p>Tool and equipment hygiene actions</p>	<p>Priority Timing / Cost</p>
<p>Harvest actions</p>	<p>Priority Timing / Cost</p>
<p>TOTAL COST</p>	

Attachments/Maps/Notes



IF YOU SEE ANYTHING UNUSUAL

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REPORT IT.**



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PEST AND DISEASE HOTLINE 0800 80 99 66**

Email enquiries to biosecurity@nzwine.com