



# Biosecurity Watch – Track and trace for vines

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## The Grafted Grapevine Standard helps reassure growers about the provenance and health of their new vines

The New Zealand wine industry is renowned for its quality and innovation, but maintaining these high standards involves more than just skilled viticulture and winemaking. It requires rigorous biosecurity measures to protect vineyards from invasive pests and diseases. New Zealand Winegrowers advocates for integrating traceability into standard operating procedures and biosecurity plans to safeguard the industry. This approach is critical for identifying, managing, and eradicating biosecurity threats swiftly and effectively.

Traceability is the cornerstone of a robust biosecurity strategy. When an invasive pest or disease is detected, immediate access to comprehensive records can mean the difference between containment and widespread infestation. Traceability involves documenting the movement of machinery, equipment, and biological materials in and out of a vineyard. These records should include dates, names, contact details, batch or serial numbers, and the previous and subsequent locations of these resources. These sorts of tasks can be automated using electronic tracing apps or GPS tracking.

This level of detail enables vineyard managers to track the potential pathways of a biosecurity threat, tracing its origin and spread.

Without such diligent record-keeping, significant time and resources may be wasted trying to reconstruct these pathways after an incursion is detected. The delay in response can exacerbate the spread of the threat, complicating eradication efforts and potentially causing extensive damage to the vineyard and beyond.

## THE GRAFTED GRAPEVINE STANDARD (GGS)

One effective method to enhance traceability is to use vines certified to the Grafted Grapevine Standard (GGS). Developed by NZ Winegrowers in 2006, the GGS ensures that grafted grapevines meet specific standards, offering assurances to growers, viticulturists and winemakers about the quality and authenticity of their vines. This certification involves rigorous testing and documentation, making it a powerful biosecurity tool. The GGS requires that rootstock

and scion material undergo either ampelographic or DNA testing to verify their varietal authenticity. Approved laboratories conduct these tests. Additionally, all mother vines used for grafting are tested for the grapevine leafroll-associated virus-3 (GLRaV-3). Any vines testing positive are removed from production.

The GGS integrates traceability throughout the grapevine production process. Key requirements include:

- Planting maps showing the location of individual mother plants
- Nursery planting maps
- Labels attached to vine bundles at each stage of production
- Records of batch sales
- Reconciliation records for each batch

These requirements create an unbroken chain of custody from the original mother plants to the boxed grafted vines ready for dispatch. This chain of custody is critical for identifying and addressing any issues



Vines are labelled throughout each stage of production

# Grafted Grapevine Standard

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# GGG CERTIFIED

GRAFTED GRAPEVINE STANDARD

that may arise during production. Throughout production, scion, rootstock, and grafted material are labelled at every stage, ensuring they can be traced back to their mother plants. If any material tests positive for GLRaV-3, the mother plants and any other material derived from them can be quickly located for testing and/or destruction. This prevents the spread of the virus, helping nurseries to remove any infected vines from their stock and protect the broader industry.

The improved traceability offered by the GGS provides several benefits. If health issues are apparent in new vines, the chain of custody can be quickly established to help investigations. Removing mother vines that do not meet virus-testing requirements decreases the incidence of GLRaV-3. True-to-type testing ensures that misidentification errors can be traced, protecting other growers who may have received vines from the same mother plant. The GGS is independently audited to ensure compliance. Auditors must be able to trace each graft lot back to its parent plants, verifying

that the chain of custody has been maintained throughout the production process.

## PRACTICAL STEPS FOR TRACEABILITY IN VINEYARDS

Vineyard managers are advised to implement traceability measures to establish and maintain records of new vine plantings. Documenting where vines come from, when they are planted, and their specific locations within the vineyard is recommended best practice. If issues such as disease, poor performance or high mortality arise, these records allow for a quick and effective investigation and response.

Growers should plant each graft lot or batch separately and create an "actual planted" vineyard map, noting the location of each lot or batch's first and last vine. For replacing vines in an established vineyard, use a spreadsheet or GPS point data to record the location of new vines and the associated batch or lot numbers. This practice ensures that if performance issues

emerge later, the source of the problem can be identified swiftly and accurately.

New Zealand Winegrowers recommends that growers purchase only GGS-certified vines and maintain thorough records of their plantings. By continuing the chain of custody beyond the nursery, growers can ensure a much more effective response and investigation into any issues that may arise in the future. This proactive approach to traceability and biosecurity is essential for protecting New Zealand's vineyards and maintaining the high standards of its wine industry.

*[An updated version of the Grafted Grapevine Standard Version 4.1 applies from 1st July 2024.](#)*

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