Biosecurity Watch – Vigilance in the Vineyard

Prevention is better than cure to control pests, weeds and disease

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The New Zealand Winegrowers biosecurity team works with growers, government agencies and the general public to help protect our vineyards from the most serious pests and diseases. While exotic biosecurity risks are a significant focus, there are also local biosecurity challenges here in Marlborough that require grower attention.

GRAPEVINE LEAFROLL-ASSOCIATED VIRUS 3

GLRaV-3 (leafroll virus) is the most destructive virus in the leafroll group and impacts wine quality and yield. It can spread rapidly through vineyards with insect vectors (especially mealybugs) and is present in all wine-growing regions of New Zealand. Mealybugs can enter a vineyard via people and machinery - including grape harvesting equipment. The NZW factsheet Mealybug Seasonal Control provides guidance on monitoring and control and the need for effective spray coverage. To help avoid spreading mealybugs throughout the vineyard, work in healthy blocks first before moving to infected areas. If you can't do this, make sure you use clean-down procedures when moving from infected to clean blocks. If a vine is infected with GLRaV-3 it should be removed from the vineyard as soon as possible. The virus can remain in the roots of old vines for several years but removing infected vines can reduce the incidence and is considered best practice. Take out as much of the root material as possible. Chemical treatment is recommended for virus-affected vines and soil around the vine to kill any mealybugs present, but these treatments have restrictions. Follow the recommended procedures on the label and in the NZW spray schedule. All new and replacement vines should be certified under the Grafted Grapevine Standard.

GRAPEVINE TRUNK DISEASE

Grapevine Trunk Disease (GTD) refers to a group of destructive fungal diseases, including Botryosphaeria dieback and Eutypa dieback, which significantly impact grape yield and quality and reduce the lifespan of the vine. As New Zealand vineyards mature, GTD is becoming increasingly common which makes proactive management essential for maintaining vineyard health and longevity as well as economic sustainability. Wounds from pruning are a key infection point for GTD. Pruning and training systems that minimise large wounds reduce the likelihood of spore entry and infection. Apply wound protection and try to avoid pruning after rain, as this is when spores are more likely to be present. Diseased wood should be removed from the vineyard or burned as soon as possible, as it can continue to release spores for an extended period and infect healthy vines. If immediate disposal isn't feasible, cover old wood to minimise spore dispersal until it is removed from the property. These preventive measures help protect vines against GTD and enhance vineyard health and resilience.

GARDEN WEEVIL

The garden weevil (Phlyctinus callosus) is an insect pest native to South Africa. In late 2020 NZW received reports of weevil damage in a Marlborough vineyard in Rarangi and the garden weevil was identified as the primary cause. It creates a "shotgun" pattern of tiny holes on leaves, and on grape clusters it scars berries, stems and bunches, and sometimes chews through entire stems. In the Rarangi case, chemical control was not available and weevil damage was causing crop reductions of up to 15%. Bragato Research Institute and the NZW biosecurity team conducted a survey across Marlborough during the 2022-2023 growing season to assess the prevalence and spread of the garden weevil. The results showed it appeared to be confined to the Rarangi area, in relatively low numbers. As a wingless insect, the spread of the garden weevil largely depends on human activity through vineyard machinery and possibly soil and other biological material transportation. Good biosecurity practices, including machinery washdowns that control the movement of this pest, will protect vineyards across the region.

CHILEAN NEEDLE GRASS

Chilean needle grass (CNG) is an invasive speargrass that poses significant challenges in Marlborough, Hawke's Bay and North Canterbury, where it aggressively outcompetes native pasture species. This resilient weed has been a persistent problem for farmers and land managers. While it has minimal direct impact on wine production, CNG is notoriously difficult to control and there are limited options for agrichemical treatment. Its presence in the vineyard can cause cost and operational complications, affecting grazing options and requiring careful management of machinery, vehicles and personnel to prevent its spread. Under the Marlborough District Council's Regional Pest Management Plan, when CNG is found each property is inspected by a Council Biosecurity Officer and a control plan is put in place. Eradicating CNG is almost impossible, so prevention is easier and more effective than managing an established infestation. Proactive biosecurity measures, especially for properties currently free of CNG, are essential. Creating a biosecurity plan and enforcing hygiene protocols can significantly reduce the risk of CNG establishing in your vineyard. Ensure that any livestock brought onto your property has not been in a CNG area and check that all vehicles, equipment and machinery entering your property are clean and free of seeds, plant material, and soil.