NEW ZEALAND WINE
PURE DISCOVERY

The NZ Wine Industry's Most Unwanted: ***Xylella fastidiosa***

Sophie Badland – Biosecurity & Emergency Response Manager, New Zealand Winegrowers

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What's at risk?

A Snapshot 2021
New Zealand Wine

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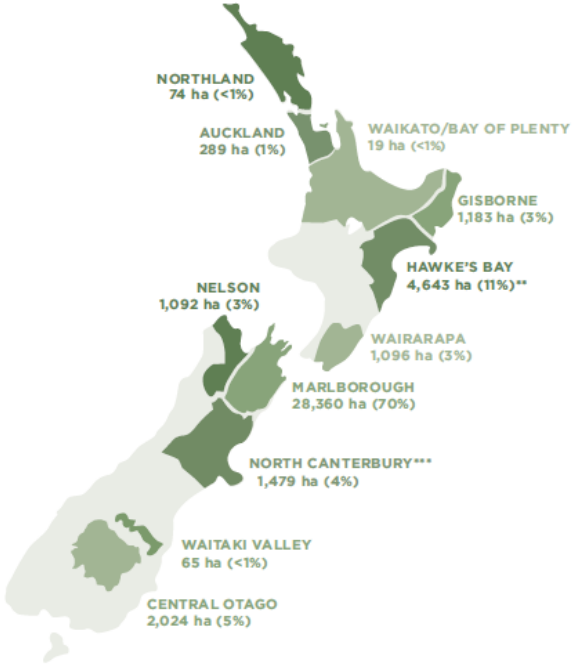
PURE DISCOVERY



TOTAL
PRODUCING AREA
40,323ha

TOTAL **PRODUCING AREA*** *BY VARIETY*

RED **7,830ha**
WHITE **32,493ha**

PRODUCING AREA OF *SAUVIGNON BLANC*
25,326ha

NUMBER OF VINEYARDS
2032

AVERAGE AREA OF VINEYARD
20ha

PERCENTAGE INCREASE ON PRECEDING YEAR
▲2%

Biosecurity is crucial for the ongoing sustainability of the NZ wine industry

Brown Marmorated Stink Bug

Image credit: PHEL

Glassy Wing Sharpshooter

Image credit: Alamy

Flavescence Dorée

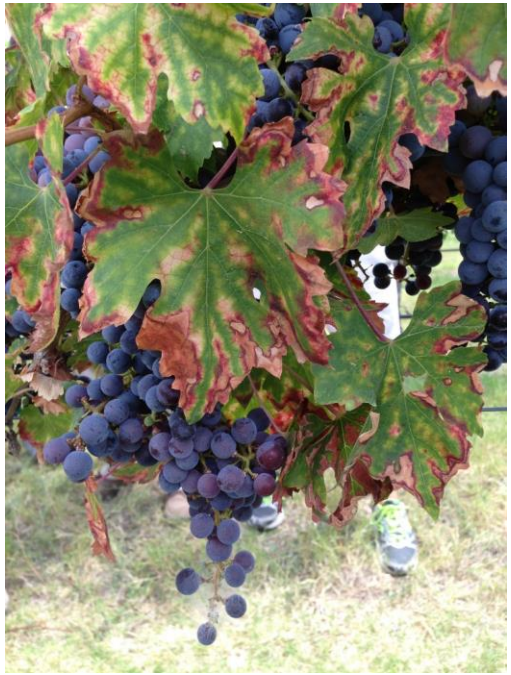
Image credit: Wikimedia Commons

Spotted Lanternfly

Image credit: Alamy

Xylella fastidiosa

- Bacterial plant pathogen transmitted by xylem-feeding insect vectors – several different strains
- Huge host range – more than 500 plant species confirmed hosts
- Bacteria multiply in the xylem tissue and blocks water transport throughout the plant, eventually causing plant death
- Symptoms look similar to water stress – difficult to detect visually
- Grapevines die in 1-3 years



Impacts overseas

CALIFORNIA

- Annual losses of $104 million US to the wine industry

BRAZIL

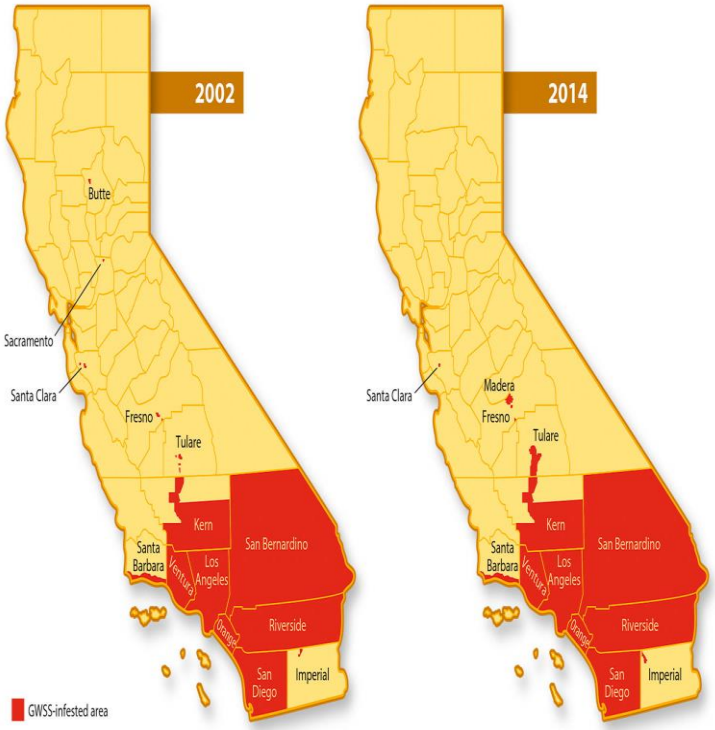
- Annual losses of $110 million US to the citrus industry

EUROPE

- More than a million olive trees killed by *Xylella* in the Salento region alone

Google Street Views of the same place near Gallipoli in 2011 (top) and 2015 (bottom), showing the devastating impact of Xylella on olive trees

Visit to California 2019



Development of Resistant Vines

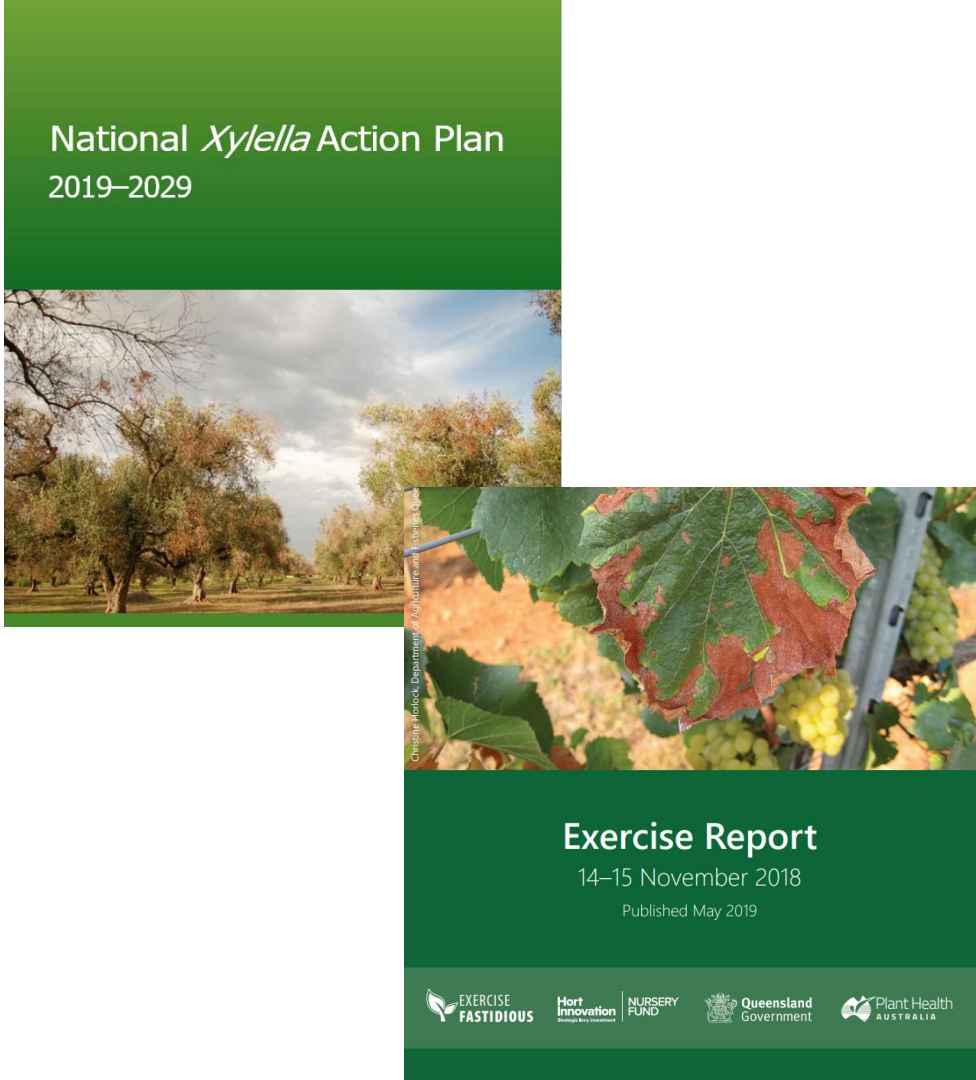
- UC Davis breeding programme has developed Pierce's disease resistant winegrape varieties
- Currently only available in the US
- May solve disease issue but challenges with market preference for well-established varieties
- Possibility of using these to combat 'edge-effect' of vector feeding, and blending resulting grapes into existing varieties

Ambulo blanc, one of two new white grape varieties, is similar to sauvignon blanc and has been tested in Sonoma, Temecula and Napa. Credit: (Dan Ng/UC Davis)

Errante noir, a new red grape variety, is most similar to a cabernet sauvignon. (Dan Ng/UC Davis)

Australian Readiness & Exercise Fastidious

- Australia has established a National Xylella Preparedness Program jointly funded by Wine Australia and Hort Innovation
- National Xylella Action Plan 2019-2029: prevention, detection, response, cross-cutting issues
- Exercise Fastidious in Brisbane, 2018



New Zealand's Readiness

- Xylella Action Group established 2018
- Literature review to establish likely impacted sectors
- Development of operational specifications for a response to Xylella
- Testing of all incoming host material upon arrival in post-entry quarantine, other pre-border measures
- Research
- Next steps?

Wine industry readiness

- Visited and established contacts with experts internationally – California, UC Davis
- Close links with Australian Xylella National Coordinator and staying in touch with what Wine Australia are doing
- Industry awareness – ‘Most Unwanted’, workshops at industry conference, regular articles and updates, guest speakers
- Request to import Pierce’s Disease resistant grapevine material from the US, when available internationally
- Understanding more about likely NZ vectors and their distribution in wine growing areas – working with Plant and Food Research
- Hope to continue leading the Xylella Action Group through further readiness work projects that will benefit multiple sectors

Conclusion

- *Xylella fastidiosa* has the potential to be devastating for New Zealand's wine industry if it arrives in a major wine region
- Readiness work is vital, as is grower awareness
- We can learn a lot from the experiences of other countries, and those further advanced in readiness planning
- Resistant varieties may eventually prove to be a game-changer; but we can't rely on those yet so must continue to find other ways to mitigate the risks