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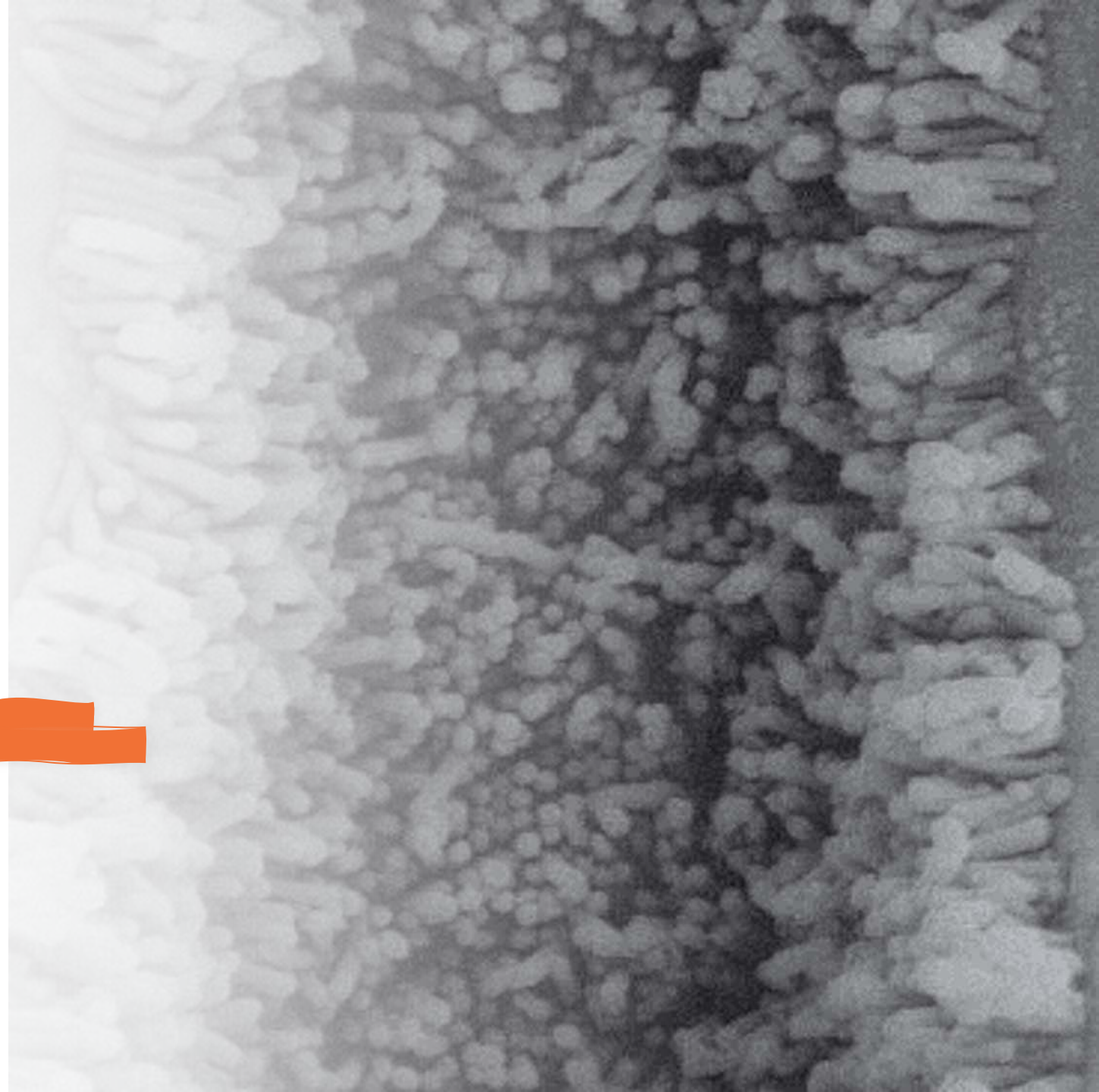
Industry Perspectives & Preparedness

APPS *Xylella* Workshop

November 2023



National Xylella Preparedness Coordinator

Recognition of the need for a coordinating point for industry (and general) preparedness

Three-year role hosted by Wine Australia and co-funded with Hort Innovation under the Plant Biosecurity Research Initiative

Role focus:

- Strengthen Xf awareness
- RD&E coordination
- Connecting researchers, government and industry
- Supporting government delivery of the National Xylella Action Plan

Wine Australia for Australian Wine

Hort Innovation

PLANT BIOSECURITY RESEARCH INITIATIVE

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First thoughts on starting....

Industry Perspectives

- Varied levels of concern
  - Risk proximity
  - 'Lived experience'
- ABARES assessments

Horticulture

- Direct economic costs to 21 susceptible crops are estimated and the potential flow-on impacts on sectors dependent on their production over 50 years
- $1.2 billion and $11.1 billion in 2017–18 dollars
- 'Significant' flow-on effects to domestic primary processing sectors
- Potential non-market impacts
  - Native species
  - Garden / Ornamental

Wine

- 3 outbreak scenarios
- $2.2 billion and $7.9 billion in aggregate losses over 50 years in 2014–15 (+ 25% higher scenario) dollars
- Winemaking more affected than grape growers
- Early detection and containment could achieve benefits (avoid losses) of $2 billion to $2.6 billion

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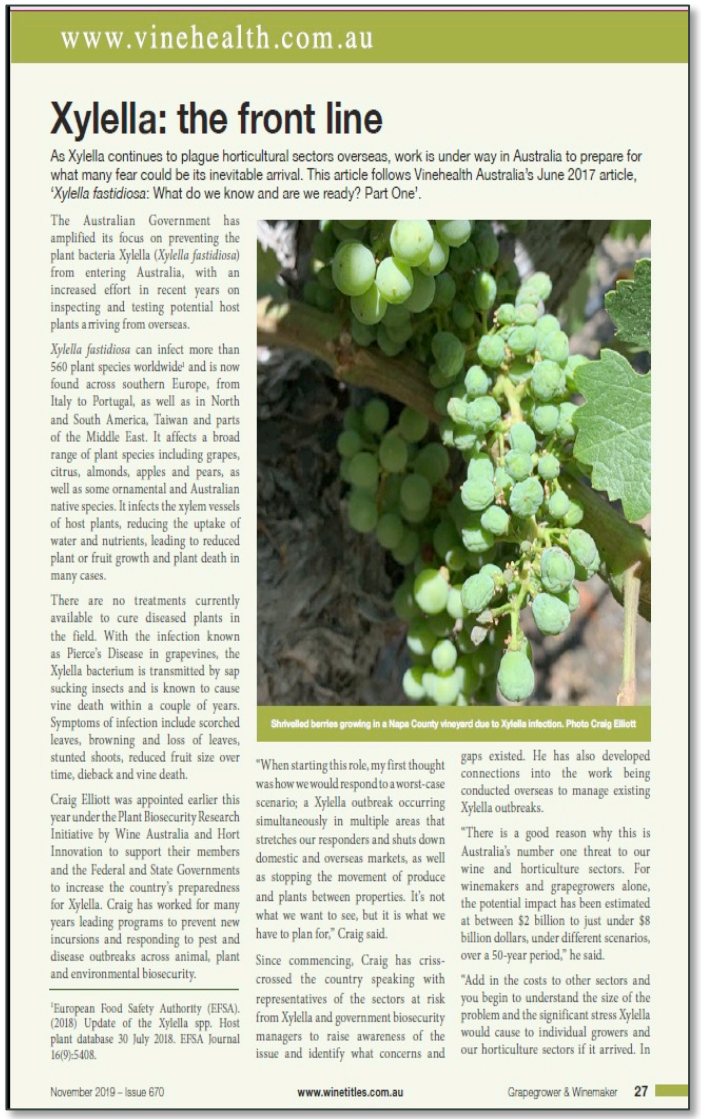
Preparedness Activities

Let's get beyond 'signs on fences'

- How you influence the market.... What is your requirements and influence on suppliers, customers, contractors and staff?
- We need to make biosecurity a core part of business and buying decisions.
- What are the barriers and motivators for the supply chain to prefer high-health plants and to adopt real biosecurity measures?
- I'm looking for some early-adopters!



www.vinehealth.com.au

Xylella: the front line

As Xylella continues to plague horticultural sectors overseas, work is under way in Australia to prepare for what many fear could be its inevitable arrival. This article follows Vinehealth Australia's June 2017 article, '*Xylella fastidiosa*: What do we know and are we ready? Part One'.

The Australian Government has amplified its focus on preventing the plant bacteria Xylella (*Xylella fastidiosa*) from entering Australia, with an increased effort in recent years on inspecting and testing potential host plants arriving from overseas.

Xylella fastidiosa can infect more than 560 plant species worldwide[1] and is now found across southern Europe, from Italy to Portugal, as well as in North and South America, Taiwan and parts of the Middle East. It affects a broad range of plant species including grapes, citrus, almonds, apples and pears, as well as some ornamental and Australian native species. It infects the xylem vessels of host plants, reducing the uptake of water and nutrients, leading to reduced plant or fruit growth and plant death in many cases.

There are no treatments currently available to cure diseased plants in the field. With the infection known as Pierce's Disease in grapevines, the Xylella bacterium is transmitted by sap sucking insects and is known to cause vine death within a couple of years. Symptoms of infection include scorched leaves, browning and loss of leaves, stunted shoots, reduced fruit size over time, dieback and vine death.

Craig Elliott was appointed earlier this year under the Plant Biosecurity Research Initiative by Wine Australia and Hort Innovation to support their members and the Federal and State Governments to increase the country's preparedness for Xylella. Craig has worked for many years leading programs to prevent new incursions and responding to pest and disease outbreaks across animal, plant and environmental biosecurity.

[1]European Food Safety Authority (EFSA). (2018) Update of the Xylella spp. Host plant database 30 July 2018. EFSA Journal 16(9):5408.

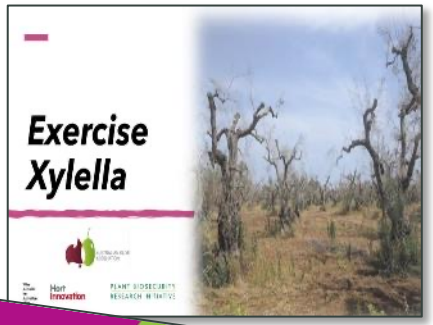
Shrivelled berries growing in a Napa County vineyard due to Xylella infection. Photo Craig Elliott

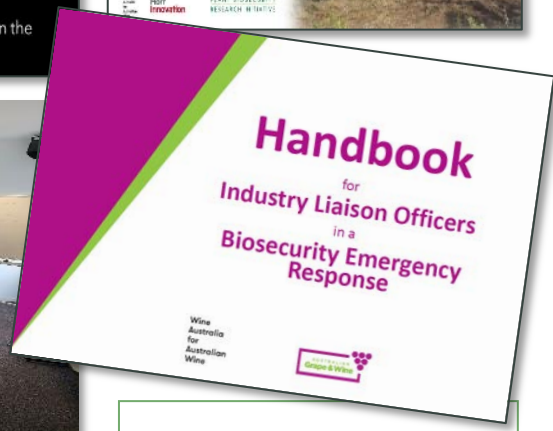
"When starting this role, my first thought was how we would respond to a worst-case scenario; a Xylella outbreak occurring simultaneously in multiple areas that stretches our responders and shuts down domestic and overseas markets, as well as stopping the movement of produce and plants between properties. It's not what we want to see, but it is what we have to plan for," Craig said.

Since commencing, Craig has criss-crossed the country speaking with representatives of the sectors at risk from Xylella and government biosecurity managers to raise awareness of the issue and identify what concerns and gaps existed. He has also developed connections into the work being conducted overseas to manage existing Xylella outbreaks.

"There is a good reason why this is Australia's number one threat to our wine and horticulture sectors. For winemakers and grapegrowers alone, the potential impact has been estimated at between $2 billion to just under $8 billion dollars, under different scenarios, over a 50-year period," he said.

"Add in the costs to other sectors and you begin to understand the size of the problem and the significant stress Xylella would cause to individual growers and our horticulture sectors if it arrived. In





Urban Plant Health Network

The Good, The Bad, and the Bug-ly Podcast

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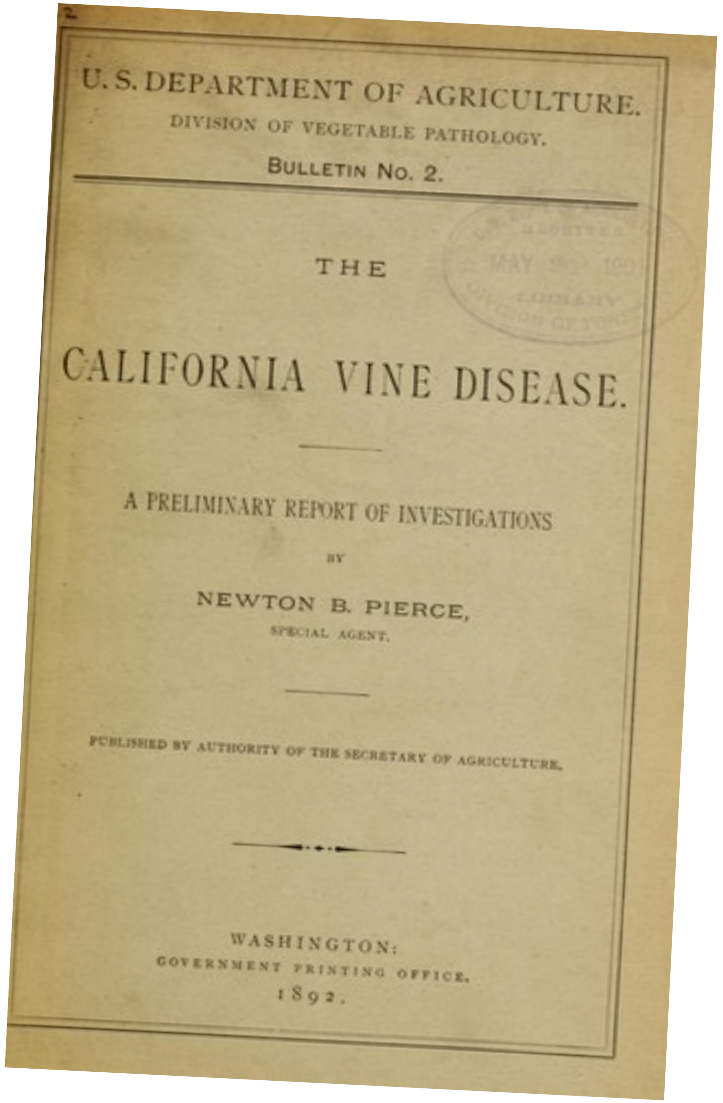
Lessons from History

California



U. S. DEPARTMENT OF AGRICULTURE.

DIVISION OF VEGETABLE PATHOLOGY.

BULLETIN No. 2.

THE

CALIFORNIA VINE DISEASE.

A PRELIMINARY REPORT OF INVESTIGATIONS

BY

NEWTON B. PIERCE,

SPECIAL AGENT.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

WASHINGTON:

GOVERNMENT PRINTING OFFICE.

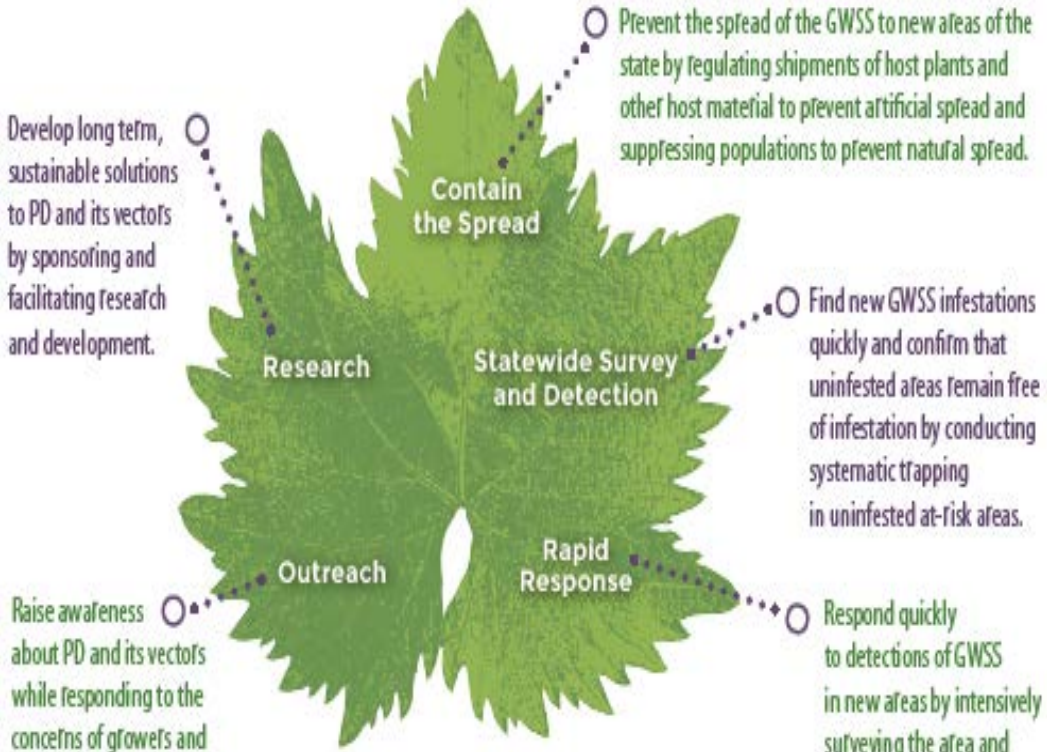
1892.

California

- California's first indication of the severe threat posed by this new disease and vector combination occurred in 1999 when over 120ha of grapevines infested with GWSS were destroyed by PD in Temecula
- Vector management (esp. GWSS)
  - Builds to high populations
  - Effective vector – leads to exponential increase in disease incidence
  - Travels longer distances in shorter time (than other vectors)
  - Multiple habitats (crops and riparian areas)

California

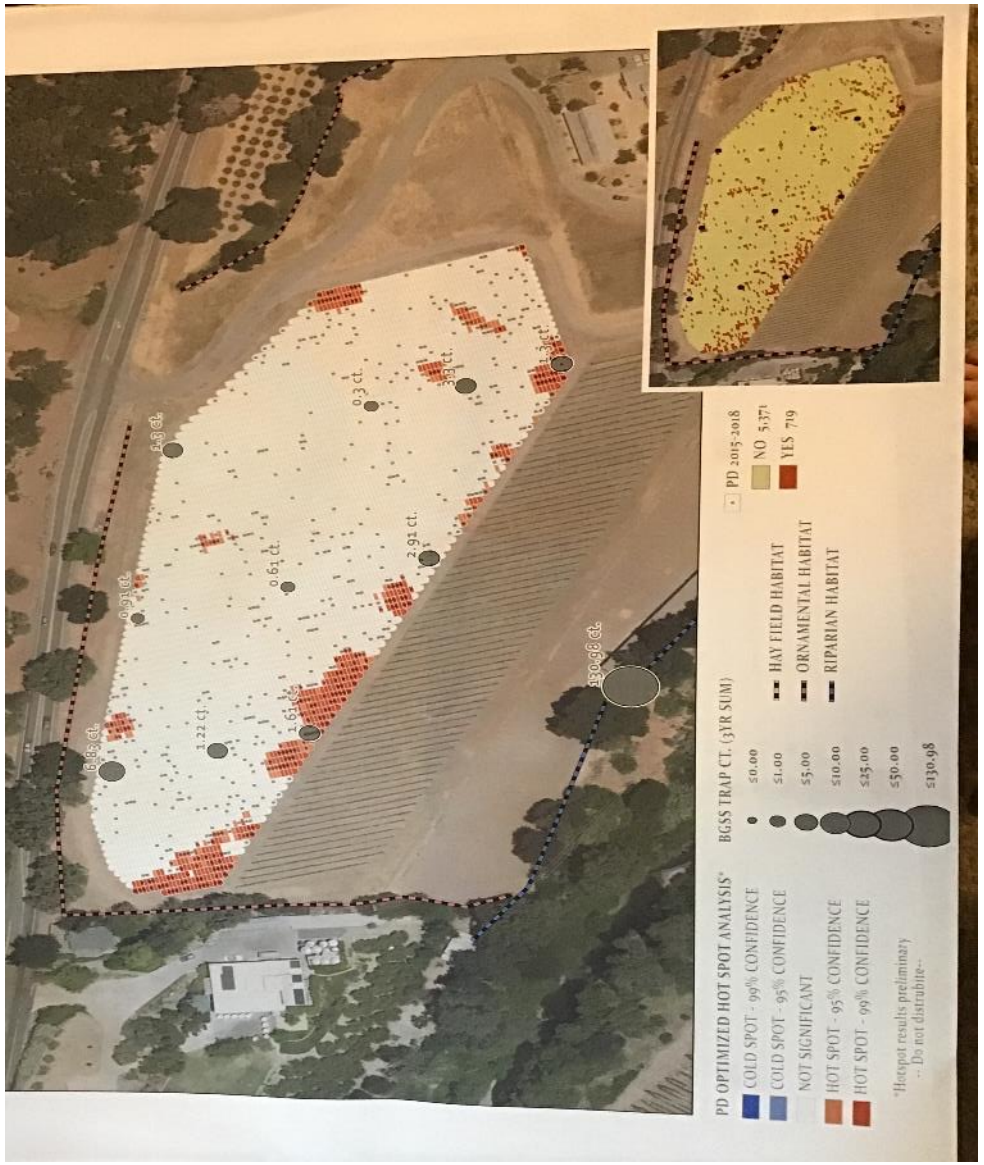
The Pierce's Disease Control Program (PDCP) works to minimize the impact of Pierce's disease (PD) in California. The strategy is to slow or stop the spread of the glassy-winged sharpshooter (GWSS) while short- and long-term solutions to PD are developed. This strategy relies upon the following five elements:



- **Contain the Spread:** Prevent the spread of the GWSS to new areas of the state by regulating shipments of host plants and other host material to prevent artificial spread and suppressing populations to prevent natural spread.
- **Research:** Develop long term, sustainable solutions to PD and its vectors by sponsoring and facilitating research and development.
- **Statewide Survey and Detection:** Find new GWSS infestations quickly and confirm that uninfested areas remain free of infestation by conducting systematic trapping in uninfested at-risk areas.
- **Outreach:** Raise awareness about PD and its vectors while responding to the concerns of growers and the public by conducting outreach and education activities.
- **Rapid Response:** Respond quickly to detections of GWSS in new areas by intensively surveying the area and applying treatments if necessary.

December 31, 2021

California



- High levels of grower and supply chain awareness and action
- Very high levels of compliance within supply chains – shipments consistently above 99% free of GWSS
  - 2021 – only 2 shipments out of 39,800 identified with GWSS
- Strong connection between government inspectors, researchers & extension officers and growers

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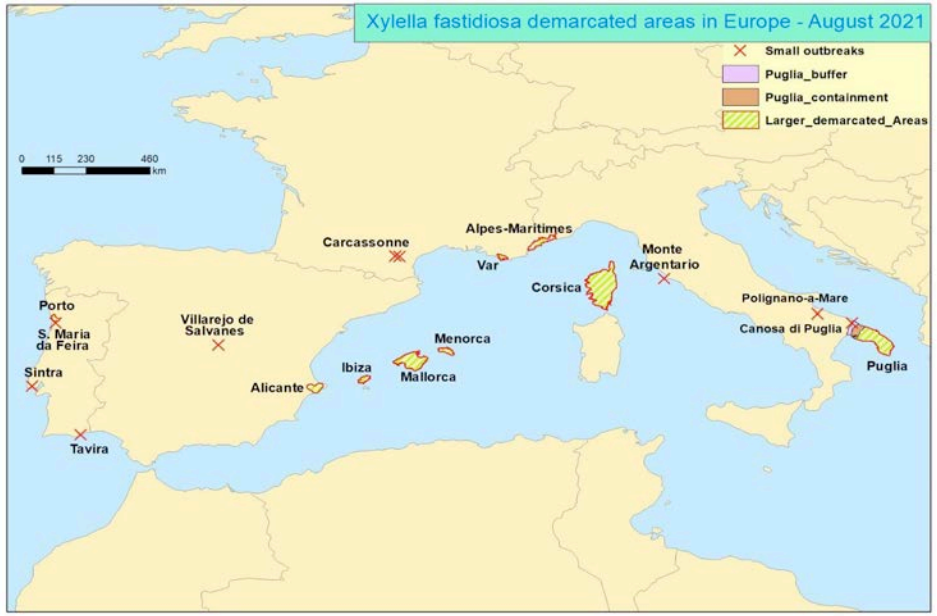
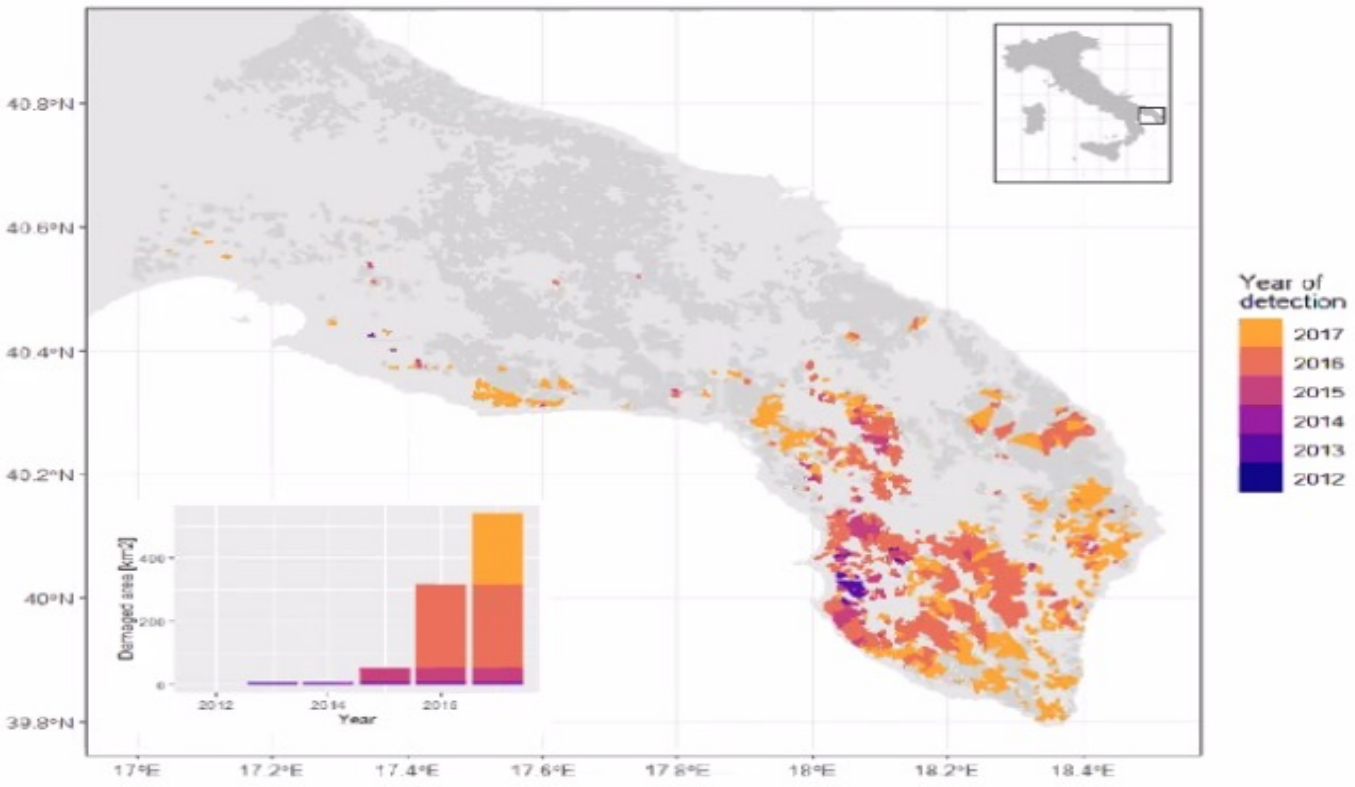
Italy

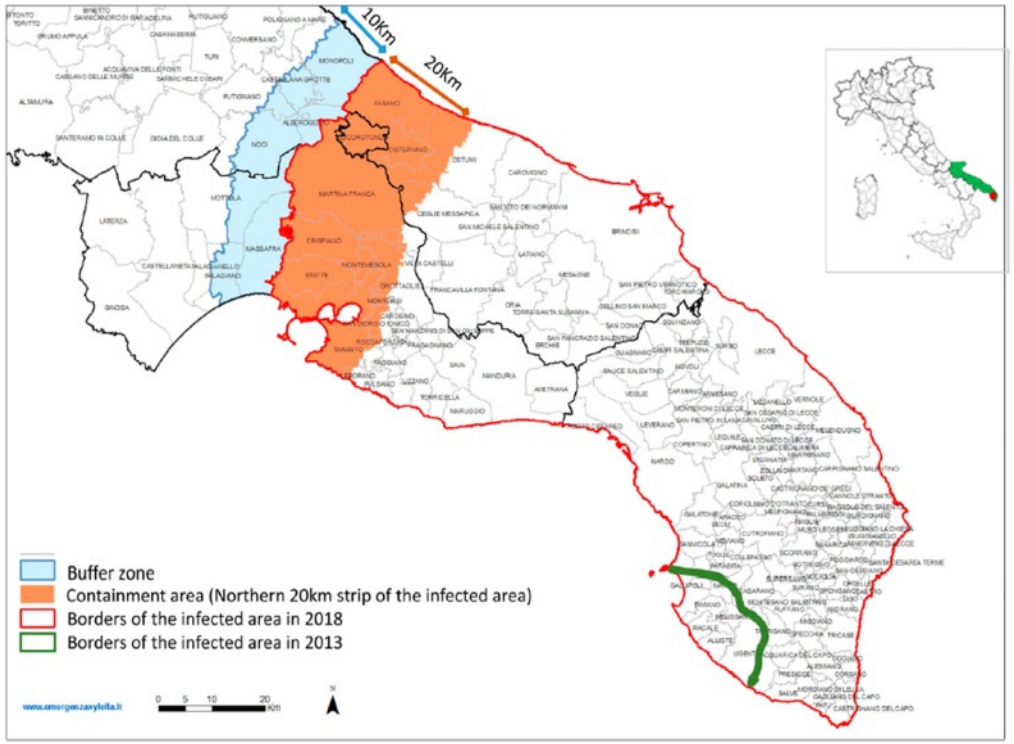
- Detected (sub.spp *pauca*) in Apulia in 2013 – Olive quick decline syndrome
- Estimated impact of € 1.9 billion to 5.2 billion over 50 yr



Italy



Progression of the area with severely olive trees severely damaged by Xylella fastidiosa *in Apulia between 2013 and 2017 (from a 2019 presentation by PSA Beck, JRC, European Commission)*



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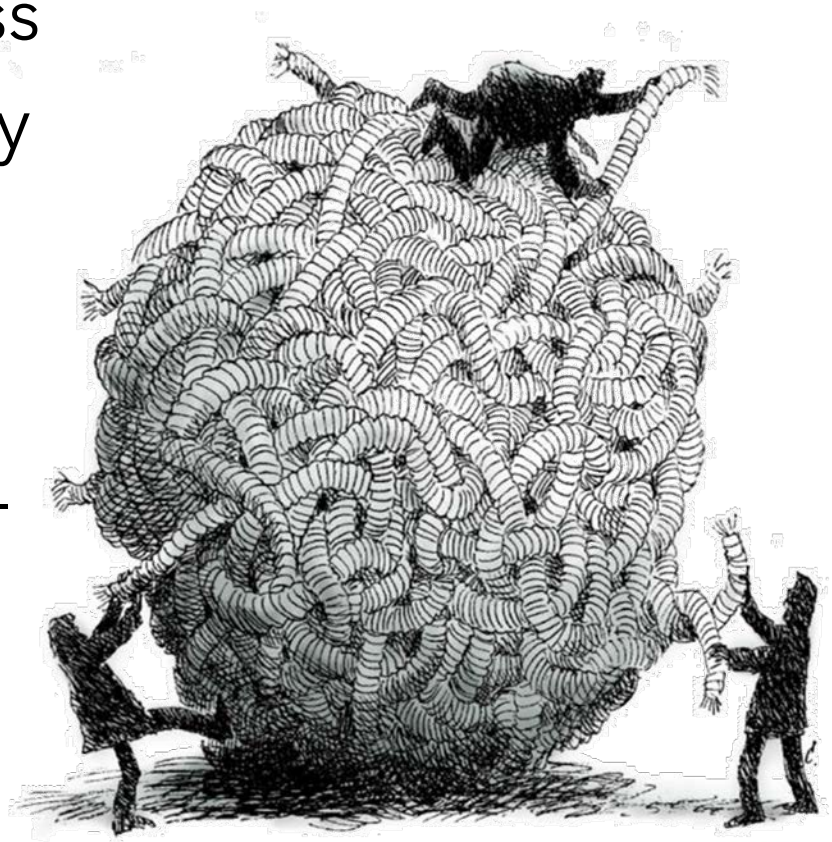
Australia

- Responses are never ‘perfect’ … VUCA – Volatile, Uncertain, Complex, Ambiguous
- Rapid response increases chances of success
- Quick decision-making is hard but necessary even in the face of knowledge gaps & uncertainty
- Tracing is even harder
- Capacity will be stretched even for medium-sized responses
- “Social licence” is becoming more problematic
- Industry leadership is critical



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