

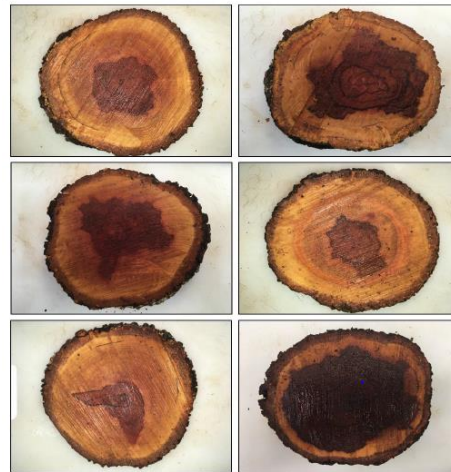


Unusual symptoms update

Linda Peacock
Wednesday 5 August 2020



Tyson, J.L., Mellow, K.D., Lewis, K.
March 2020



Unusual symptom reports Feb to July 2020

- Whangarei, Waiuku, Tauranga, Te Puke, Opotiki, Hawke's Bay, South Island, (France)
- HW, Gold3, Bounty, Bruno, Cryptomaria
- Testing: MPI-2; Plant Diagnostics-4; PFR-1; Hills Lab-3
- Referrals: Nutritional-3; Consultant-1; Zespri Fruit Quality-2



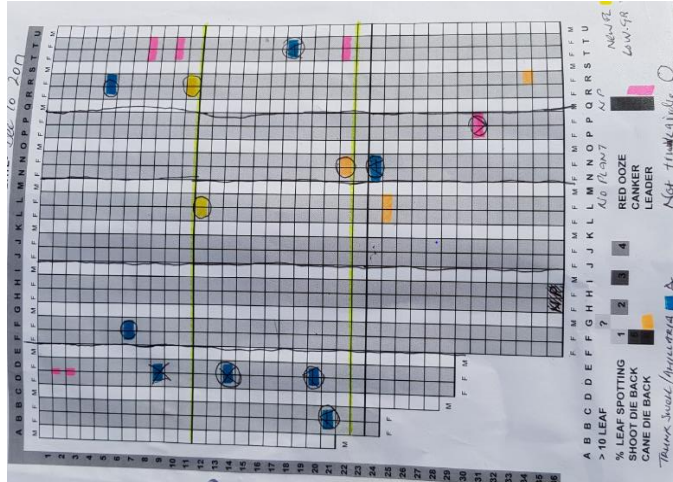
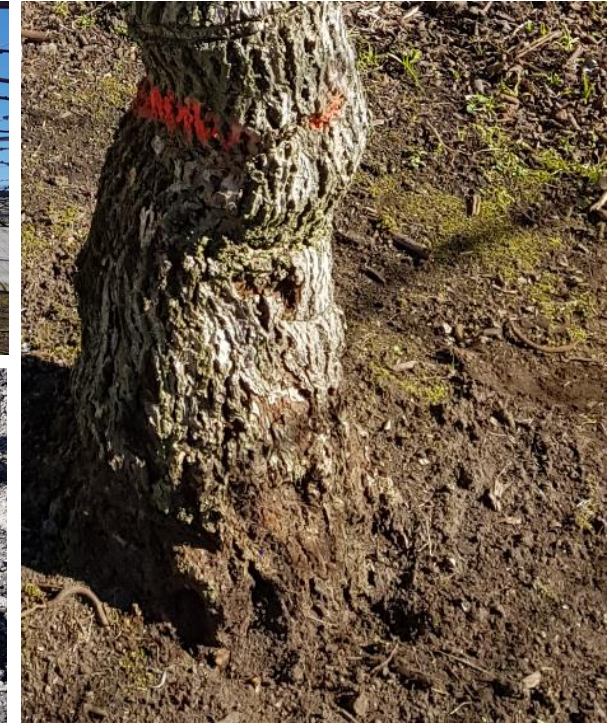
Gold3 - Whangarei

Infections moving up from
the plant base

- *Cylindrocarpons* (*Ilyonectria* *Dactylonectria* species) consistently isolated
- Previous land use likely a factor
- Soil type noted as nutritionally poor /poorly draining

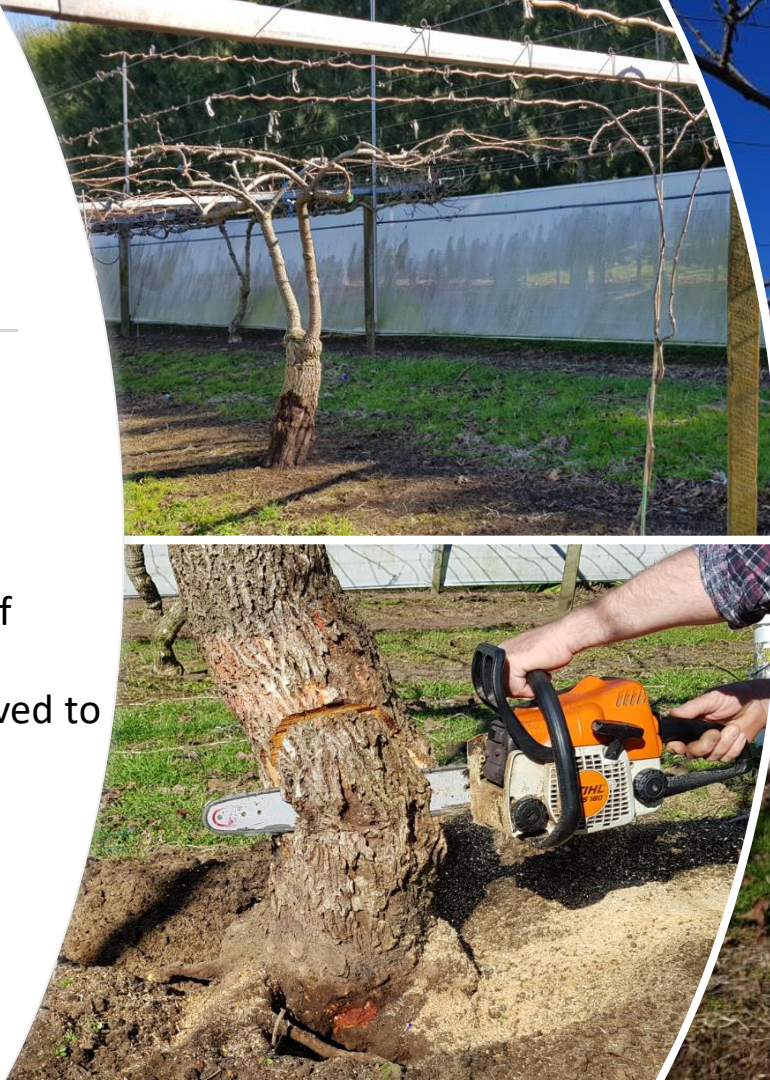
Gold3 - Tauranga

- 8 vines across 1.54 Ha
- First symptoms (2017) followed two wet winters/dry summers



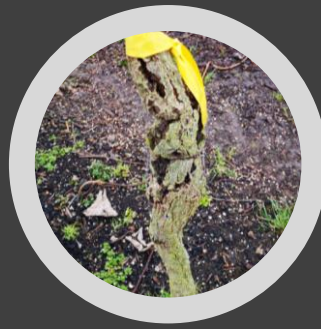
Actions

- Soil, root and trunk samples to Plant Diagnostics
- New plants planned (2% with symptoms)
- Re-grafting suckers of affected vines
- Pruning debris removed to avoid infection risk
- Drainage checks and improvements
- Reviewing nutrition
- Tool hygiene



Gold3 – Hawke's Bay

- Areas with poor bud-break seen in Spring 2019
- Production drop this season
- Mushy buds reported - autumn
- Various canker symptoms - some associated with grafts
- Samples are with MPI



Background

- September 2019 – orchard drains were cleared - with a noticeable drop in water levels the day after clearing
- October 2019 - more than 140mm of rain fell in 2 days
- Standing water adds risk



Shelter species diagnostics

- 2019: 5-6 (2m) trees with symptoms
- 2020: more symptoms, including on two more sites (>5km away)
- Counted 50-80 affected trees (0.5-1.8m). Problem trees were often in groups (5-15 trees)
- No change in planting, fertilizer, or irrigation processes
- Root samples showed *Phytophthora sp*, *Cylindrocarpon sp*, *Pythium sp*.
- In stems: *Pestalotiopsis sp* (associated with dieback and cankers in conifers)



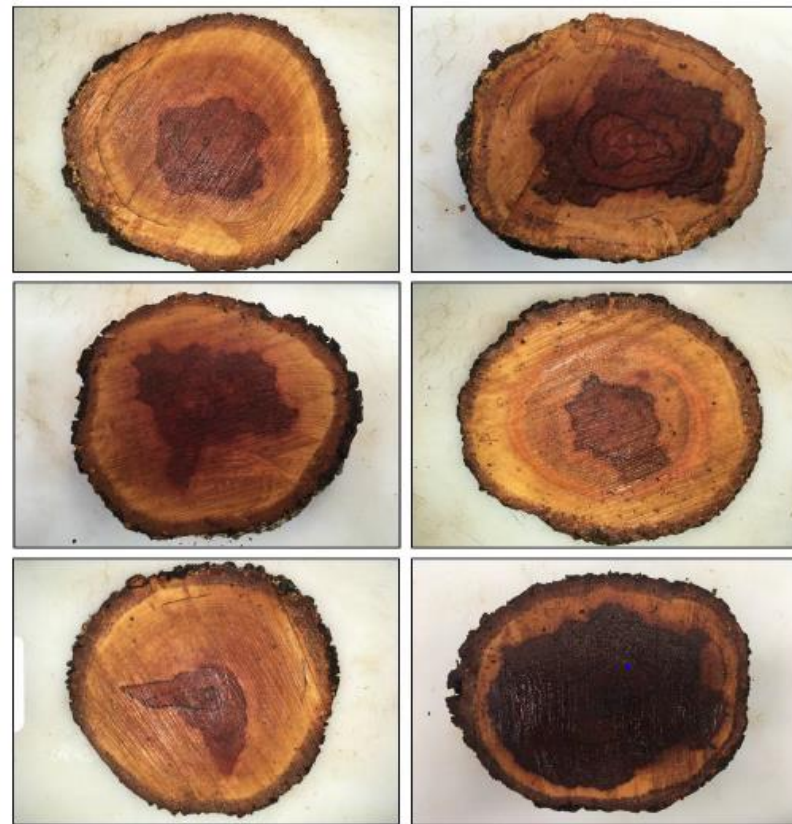
Vine decline – research results

Kiwifruit vine decline woody trunk isolations (part 2)

Tyson JL, Mellow KD, Lewis K

March 2020

- Isolations from a project on vine decline have added knowledge regarding the causes of discolouration of kiwifruit trunks from symptomatic vines
- ***Neonectria*, *Ilyonectria* and *Neobulgaria alba* (*N.alba*)** were the main fungal genera isolated from woody trunk sections for a Te Puke orchard
- Research projects to test pathogenicity of ***Neonectria*** and ***Ilyonectria*** are already underway
- ***N. alba*** has been isolated in previous research projects investigating “swollen trunk syndrome”
- Pathogenicity testing was recommended for this species also



Phytophthora – readiness under GIA

- Phytophthora is present in kiwifruit globally – but what about in NZ?
- Research begins in 2020 to build baseline knowledge
- 25 KPINS per sample round across NZ growing regions
- Spring and autumn 2020-2021

CAN YOU HELP??

INVASIVE PHYTOPHTHORAS

- Known as the plant killers – a group of significant plant pathogens and a major threat to all plant sectors.
- Species have caused significant impacts to kiwifruit offshore. Many other known and unknown species could also cause impacts under certain conditions.
- Easily spread, particularly with plant material movements.
- Can spread in plants showing no symptoms.



Risk Months: Year Round
I can enter NZ hiding on:





Something to report?

KVH: 0800 665 825