KPCS Nursery Forum

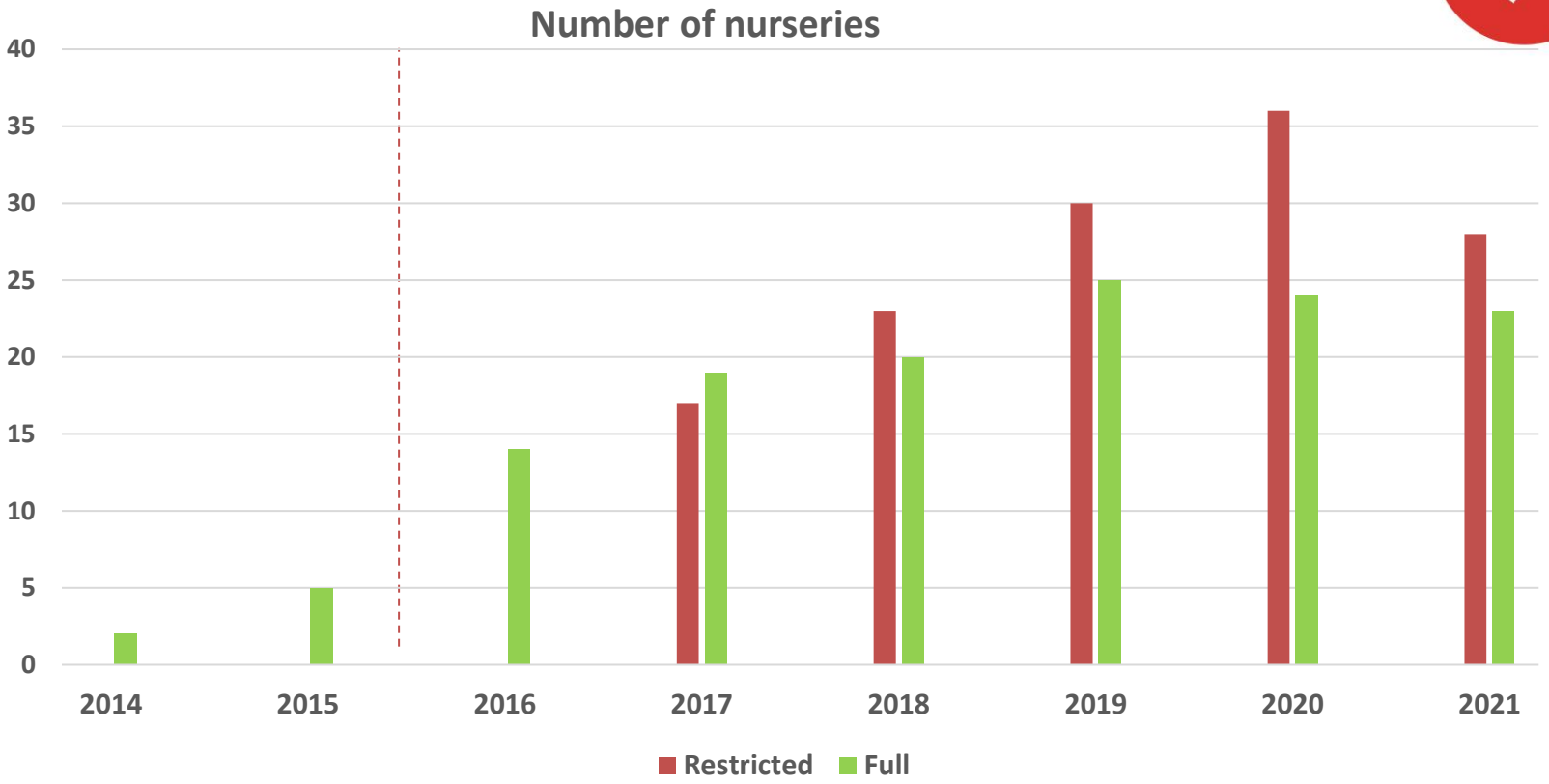
25 March 2021

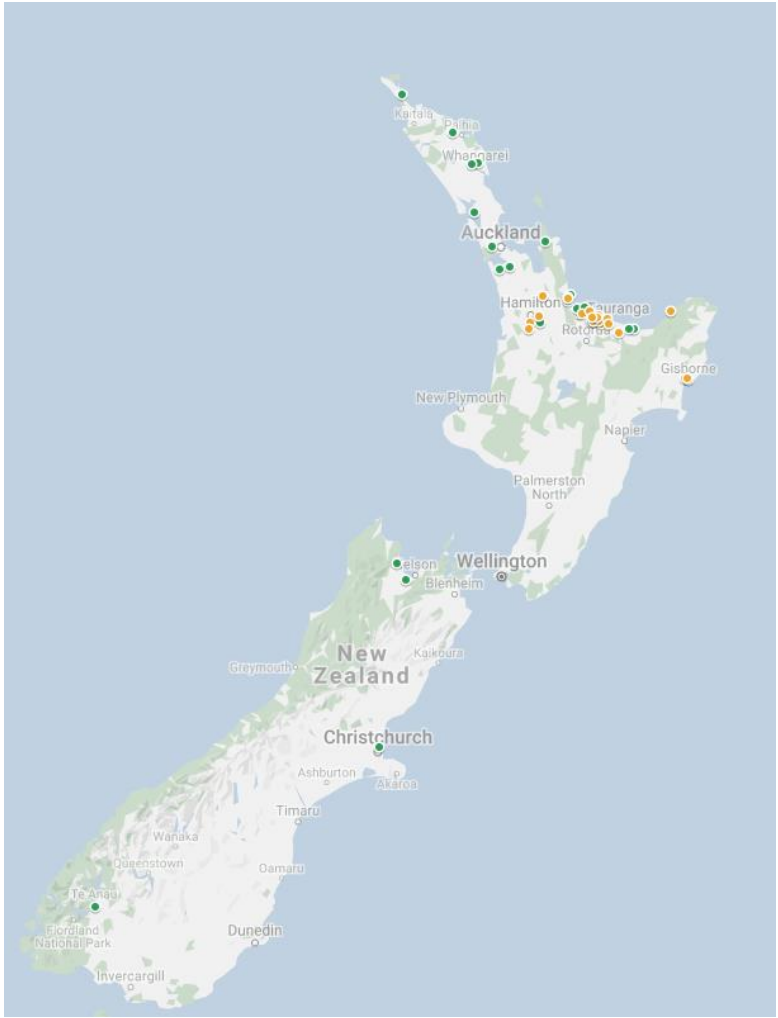
Agenda

10.00am	Introduction and Welcome	*Stu Hutchings - KVH*
	Nursery stats and updates to KPCS Standard	*Karyn Lowry - KVH*
	Pathway Management Plan	*Matt Dyck – KVH*
	NZPPI update	*Matt Dolan – NZPPI*
	Report the unusual	*Erin Lane – KVH*
	Detecting *Phytophthora* in nurseries	*Rebecca McDougal – Scion*
	KIPPA update	*Jeff Sandford – Waimea*
	Any further questions/discussions	*All*
11.50am	Closing comments	*Stu Hutchings - KVH*

Nursery stats and audit outcomes

Karyn Lowry


Number of nurseries
40
35
30
25
20
15
10
5
0
2014
2015
2016
2017
2018
2019
2020
2021
Restricted
Full



Nursery locations

As at March 2021

- 23 Full certification nurseries
- 28 Restricted certification nurseries

Common errors/reminders

- Dispatch records must have a KPIN and address – nurseries can only dispatch to other KPCS nurseries or orchards with a current (Zespri) KPIN unless permission from KVH has been given to do otherwise.
- Greenfields developments are Psa Not Detected.
- Only one KPIN per dispatch record.
- Dispatch record must be signed by purchaser acknowledging destination KPIN and address correct.
- Incoming plant material must be recorded – use supplier template.
- Movement controls must be observed - restricted certification plants must only go to Psa positive KPINs.
- If using bactericides (Kasumin, KeyStrepto) prior approval required from KVH.
- Complete corrective action within required timeframe.
- Planting advice is useful.

Your co-operation please

- Whangarei has recently changed to a Recovery region but nearly two thirds of the orchards in this regions are not Psa positive.
- KVH asks for your assistance in keeping inoculum levels low in this region by supplying only Full certification plants to all growers in the Whangarei region.
- Kiwifruit packhouses have also been asked by KVH to continue to provide dedicated harvest bins on a closed loop system to the Whangarei region's growers (as they did when it was a Containment region).

Updates to KPCS

Karyn Lowry KVH

Updates to KPCS Standard

1. Routine updates - minor changes to improve the Standard
2. To better align with PPBS
3. For Pathway Plan implementation

To minimise impact we have tried to consolidate into a single update.

Updates to KPCS

CHANGE	SECTION	DETAIL	REASON	CHANGE TAKES EFFECT
Addition of requirements for shelter trees	All	Shelter plants for kiwifruit orchards to have the same requirements as kiwifruit plants including dispatch record (but excluding sampling and testing requirements and mother plant certification).	KVH Pathway Plan	1 April 2022
Fertiliser	GM	Added fertiliser to assurances around potting mix and compost. Storage areas to prevent water ingress – free of pests. Record inspections of incoming material (Supplier record)	Potting mix and compost already included-makes sense to add fertiliser. Also, a PPBS requirement.	1 July 2021
Plant Containers	PM HG	Best practice for new containers- inspect on arrival and record. (can use existing supplier record). Safe storage -free from weeds/pests. If reusing clean and sanitise - segregate from new.	PPBS requirement Extension of exiting hygiene procedures- good biosecurity practices.	1 July 2021
Irrigation	PF1	Add source of water used. Add measures to manage risk - maintenance of irrigation lines. Avoid overhead watering. Water testing records on file -tested for pathogens if river, pond dam water used.	PPBS requirement Overhead watering increases risk of transfer of disease (Psa)	1 July 2021
Soil	D1	Add in requirement for field grown plants to be free from soil (as far as practicable) at time of dispatch.	Lowers the risk of transmitting soil -borne diseases	1 July 2021

Pathway Plan changes

- Addition of shelter belt species to KPCS
  - Applies to plants provided to kiwifruit production areas on orchards only
  - Monitoring, hygiene, traceability records maintained
  - Dispatch records as for kiwifruit plants
- No additional testing requirements proposed (for shelter or kiwifruit), possible future additions based on risk.
- Plan for voluntary adoption before pathway plan comes into effect on 1 April 2022.

Process

- By the end of April KPCS Standard will be updated to version 6.0
- 1 July 2021 – nurseries to update their manuals to new version
- New logo to be produced for shelter plants - e.g.

Pathway Plan Update

Matt Dyck KVH

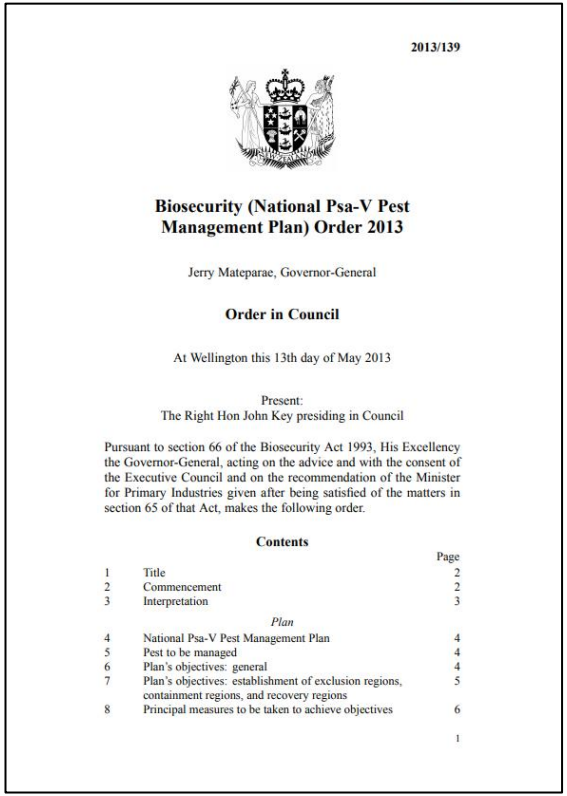
What's being proposed

National Psa-V Pest Management Plan (NPMP) since 2013:

- Successful in reducing impact and spread of Psa
- Expires in 2023
- Only focusses on Psa and KVH works in readiness and response for multiple threats

Pathway Management Plan (PMP):

- Manages risk across pathways into orchards
- Keeping it simple
- Very little change from current plan except to increase ability to respond to multiple pests across pathways
- **Fiscally neutral (levy)**



2013/139

Biosecurity (National Psa-V Pest Management Plan) Order 2013

Jerry Mateparae, Governor-General

Order in Council

At Wellington this 13th day of May 2013

Present:
The Right Hon John Key presiding in Council

Pursuant to section 66 of the Biosecurity Act 1993, His Excellency the Governor-General, acting on the advice and with the consent of the Executive Council and on the recommendation of the Minister for Primary Industries given after being satisfied of the matters in section 65 of that Act, makes the following order.

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1

What are our objectives?

The proposed Pathway Plan will:

1. detect biosecurity threats on kiwifruit industry pathways early, and reduce their spread
2. ensure biosecurity threats can be rapidly traced on kiwifruit industry pathways
3. improve understanding of kiwifruit industry pathway risks and how they can be cost-effectively managed

THEGUARDIAN.COM

Mystery disease killing Italy's kiwifruit baffles scientists

Government taskforce to study sickness devastating kiwi orchards across…

KIWIFRUIT PLANT CERTIFICATION SCHEME
KPCS

Organic matter inputs
Compost, soil and mulch

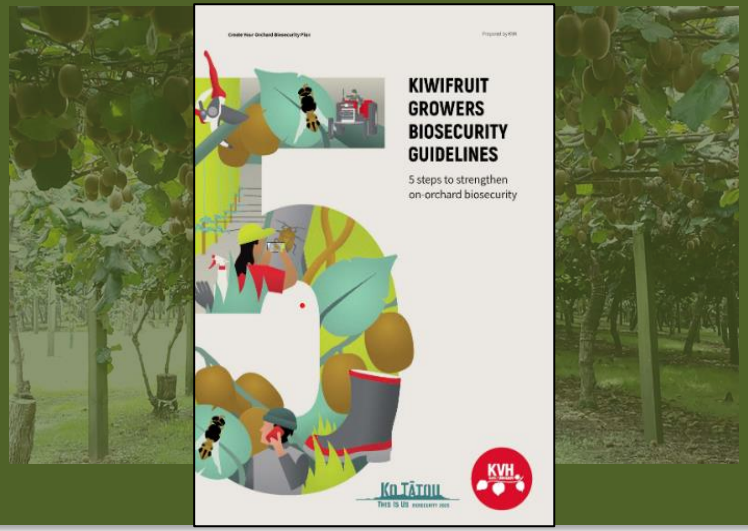
KVH KIWIFRUIT VINEHEALTH

Zespri KIWIFRUIT

KVH KIWIFRUIT VINEHEALTH

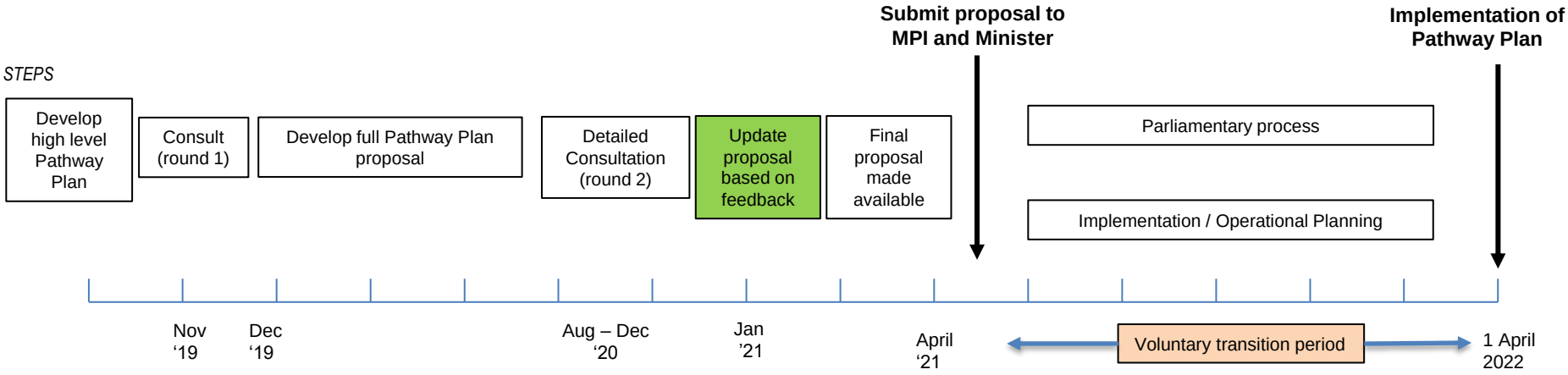
Plant Material
- Rootstock & grafted plants
- Mature plants
- Budwood
- Pollen
- Shelter plants

Kiwifruit orchard



People and equipment
- Orchard management services
- Shelter belt trimmers
- Spray contractors
- Orchard infrastructure
- Harvest crews & bins
- Grafters

Timeline to implementation



Feedback on the overall proposal

What we have heard during consultation...

“Look I think biosecurity is important, especially at the border, but I have issues with the plan...I can’t put my finger on a specific detail I don’t like, but we don’t need more compliance.”

“Actually growers are doing most of this already, why are you making this such a big deal.”

Summary of feedback received

Feedback relates to:

1. Keeping it simple and appropriate to level of risk
2. Providing tools to make it easy
3. Maintaining trust

WHERE HAVE WE LANDED?

Safe movement of plants

Kiwifruit nursery & orchard plants + shelter

- Register with KVH
- Traceability and record keeping
- Hygiene practices
- Monitoring
- Growing media requirements apply
- Any specific requirements for high-risk organisms

\+ Plant material inputs

\+ Testing

\+ Crop protection

Pathway plan changes from current state

- New requirements for shelter belt plants
  - Applies to plants provided to kiwifruit production areas only
  - Monitoring, hygiene, traceability records maintained
- No additional testing requirements proposed (for shelter or kiwifruit), possible future additions based on risk
- Plan for voluntary adoption before pathway plan comes into effect on 1 April 2022.

What does this mean for me?

If I am a...	Change from current state
KPCS nurseries selling kiwifruit plants	No significant changes
KPCS nurseries selling kiwifruit and shelter plants	Shelter plants can meet KPCS standard
Non KPCS nurseries selling shelter plants to kiwifruit orchards	Meet equivalent level of biosecurity certification
Moving mature plants	KPCS Standard, similar to current requirements
Growers sourcing plants	Source certified plants

Reporting the unusual

Erin Lane - Biosecurity Adviser, KVH

Why report the “unusual”?

- Unusual is anything without an obvious explanation, or even a change in what was previously considered “normal”.
- Surveillance is important to facilitate early detection. This is one of the biggest predictors of eradication success.
- Reporting of unusual symptoms gives industry the best chance of identifying things that are “new” or emerging
  - possibly organisms new to NZ science
  - new associations of organisms with kiwifruit
  - organisms already present but risk profile appears to be changing




Summary of 2020 reports

37 reports through to KVH

- 19 pathogen related
- 10 pest/insect
- 2 nutritional
- 5 “other”- i.e. associated to frost damage, girdling damage
- Jury is still out on a few recent reports…

On what?

HW, G3, Bounty, Bruno, Cryptomeria

Where?

Kerikeri, Whangarei, Waiuku, Tauranga, Te Puke, Opotiki, Hawke’s Bay, South Island

Importance of monitoring

- As part of KPCS - monthly monitoring of anything unusual and reporting.
- Symptoms of any target organisms, plants displaying unusual symptoms, or presence of pests unidentifiable to the monitoring staff.
- Particular attention should be given to high-risk areas;
  - In indoor nurseries this is likely to be closest to entrances, vents and areas near people movements.
  - In outdoor nurseries this is likely to be areas; exposed to prevailing winds, near entrances and other boundaries particularly those closest to any neighboring orchards.
- Good record keeping is essential for effective monitoring.

Template: Monitoring Record

MONITORING RECORD						
Nursery name:						
Nursery Inspector name:						
Monitoring date:	Location and name of block:	Variety:	Leaf spotting or other symptoms observed?	Description of symptoms observed:	Action taken (e.g. ring KVH 0800 665 825)	Lab test required?
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO
			YES / NO			YES / NO

Case study 1: Virus

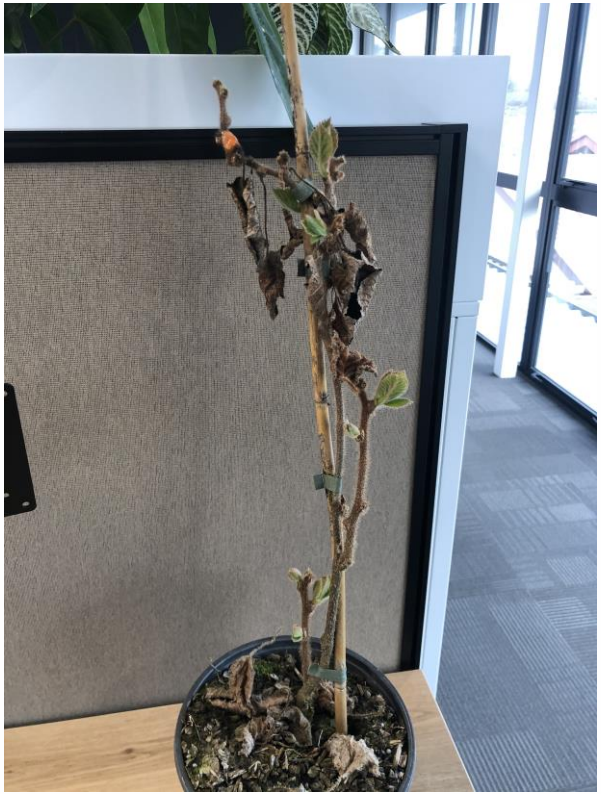
- What?
  Blotching on leaves of young Bounty seedling in nursery. After further monitoring this was the only plant affected.
- Contacted Plant Diagnostics for advice – thought not to be nutritional but might be spray related suggested sending to MPI for analysis.
- Sample sent to MPI and Tomato Spotted Wilt Virus (TSWV) confirmed.
- TSWV hasn’t been found on kiwifruit anywhere in thew world but is common in NZ. Transmitted by thrips.
- Further samples were taken, and all samples were returned negative for TSWV.

Case Study 2: knowing what's "unusual"

- What?
  Staff reported seeing tip dieback on young Bounty in greenhouse - no other Psa signs.
- Sent samples to Hills to eliminate Psa and duplicate samples to Plant Diagnostics for further analysis.
- Hill samples ND for Psa and Psa-LV.
- Plant Diagnostics reported a range of fungi - thought symptoms most likely due to some type of stress or physical injury.
- *Phoma sp, Pythium* and *Fusarium in* the roots, *Alternia sp,* and *Pseudomonas sp.*

Case study 3

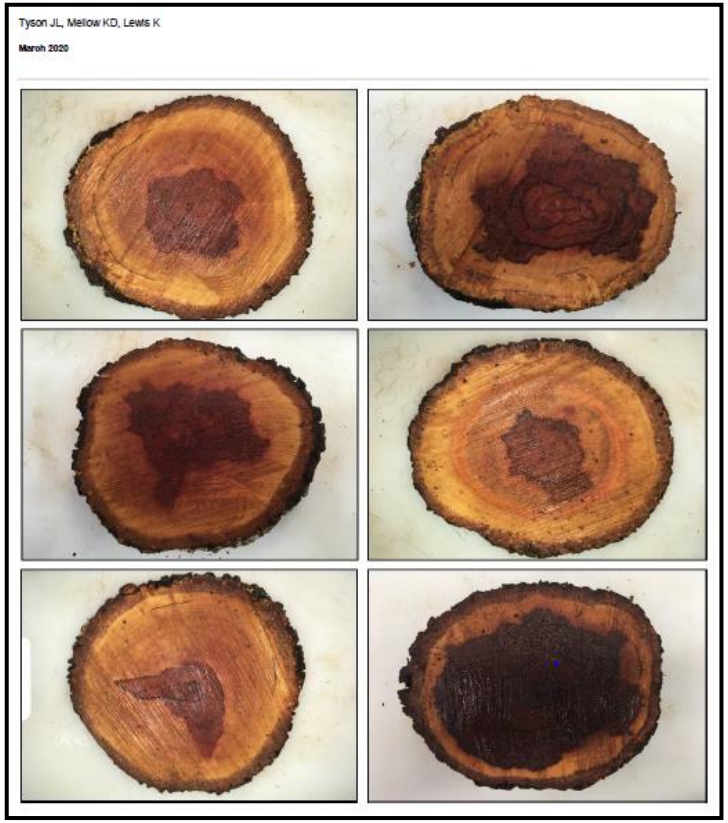
- What was reported?
  - One Bruno seedling in greenhouse at nursery with dead leaves and orange ooze- noticed during monitoring round. After further monitoring, advised that a further plant found with the same symptoms in the same greenhouse.
- Sent plant to Plant Diagnostics for evaluation.
  - *Diaporthe australafricana*- likely causal agent
  - *Fusarium sp*- weak pathogen
  - *Volutella sp* – secondary pathogen or saprobe.
- *Diaporthe*: This fungus has been recently recognized in New Zealand, but historical cultures have also been confirmed. It is known to be associated with cankers of kiwifruit overseas.



Case study 4: Shelter species

- 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 cryptogea and P. cinnamomi****, Cylindrocarpon sp, Pythium sp.*
- In stems: *Pestalotiopsis sp* (associated with dieback and cankers in conifers).

What do we do with these reports?



- Research extension
- Creating good management practice advice
- Understanding changes in risk profiles
- Sharing the knowledge


KVH
KIWIFRUITVINEHEALTH

GIA Deed – Benefits

Matt Dolan, New Zealand Plant Producers Incorporated

- A partner in the biosecurity system
- Deed includes transparency, equity and consistency
- Provides protection in a crisis
- Decision making rights
- Puts a limit on the cost of a crisis
- Manages business risk

GIA
Biosecurity through Partnership

Government Industry Agreement for Biosecurity Readiness and Response

GIA Deed - Costs

- Minimum commitments
- GIA administration costs
- Operational agreements
- Know-how and effort

Government Industry Agreement for
Biosecurity Readiness and Response

Operational Agreements (current)

- PPBS Readiness OA
- *Xylella* Readiness OA
- Tomato Red Spider Mite response OA
- Tomato Brown Rugose Virus Response OA

GIA
Biosecurity through Partnership

Government Industry Agreement for Biosecurity Readiness and Response

Critical shifts

Sucking it up

Making it happen