Psa good practice

Linda Peacock - 9 September 2020

Good practice

"A good practice is not only a practice that is good, but ***a practice that has been proven to work well and produce good results****, and is therefore recommended as a model"*

Good science, and measured trial results.

How did that happen?

The story so far…

- Psa can be present on the outside and inside of expanding buds in Spring.
- At budbreak - Psa under bud scales adds to inoculum load.
- Spring rains support Psa multiplication and spread.
- **Good practice - have a good coverage with winter rate copper in place as Spring buds emerge**.

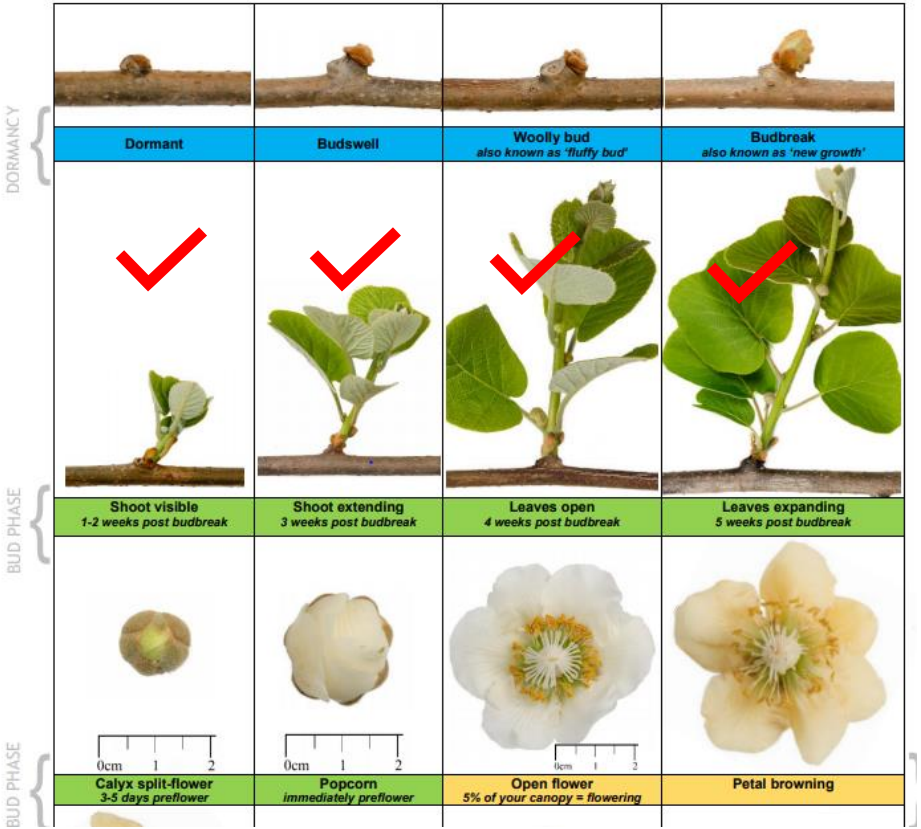



New tissue needs protection

- Young leaf tissue is vulnerable to Psa (highest risk is 1-3 weeks after budbreak)
- Leafspot typically takes 14 days to develop
- It remains an inoculum source
- **Good practice - maintain a strong early season spray program to reduce risk of leaf spot developing.**

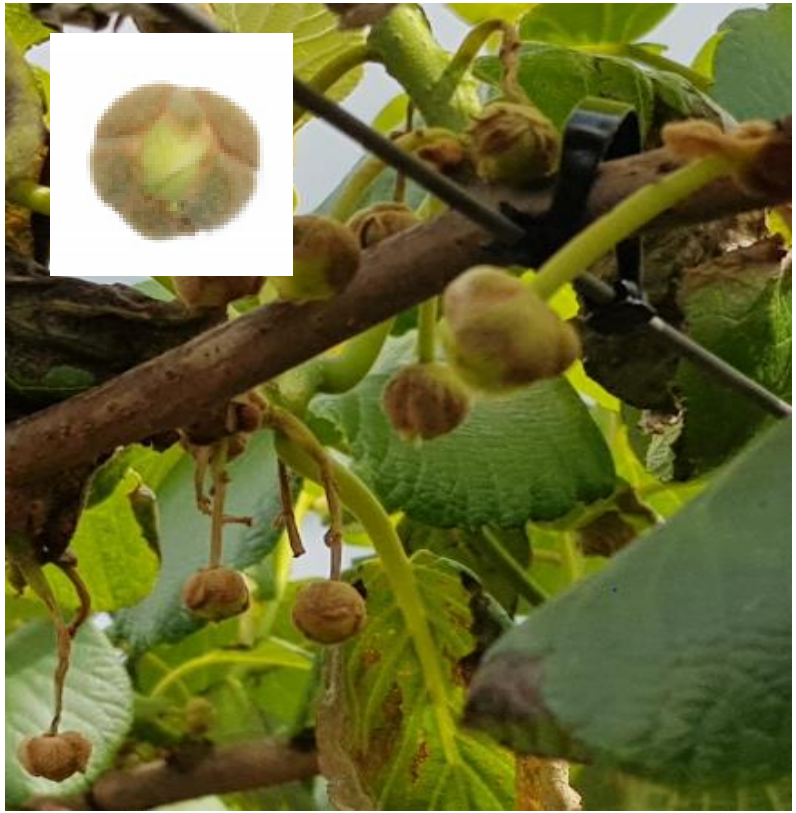
When is Psa infecting Hayward flower buds?

- very early (1-2 weeks after budbreak)
- with rain
- from the outside in
- “more inoculum = more risk”

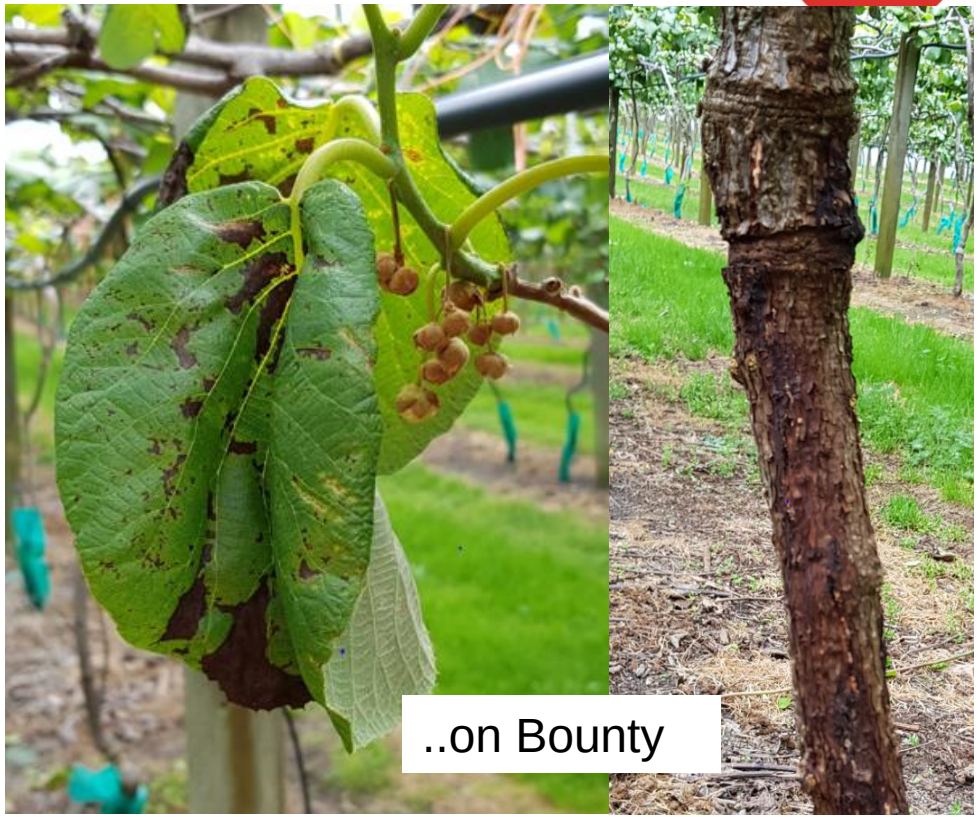


What about Gold3?

- Infection shows 4-5 weeks after budbreak (as sepals separate)
- Psa can be on sepals much earlier (despite no visual symptoms)
- Likely infection period is 2-3 weeks after budbreak
- Psa moves from outside the flower-bud into internal flower parts and disease development continues even after flowering

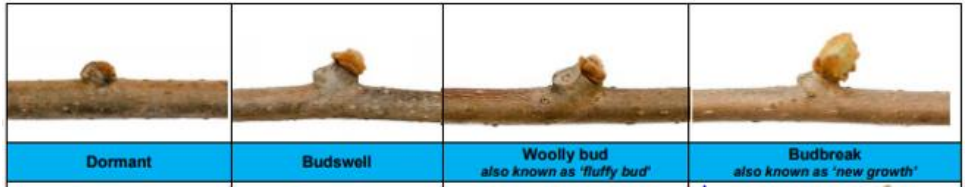


Gold3 – varietal impacts



Infection risk starts early

- Consider male timing
- Gold3 on Bounty will be ahead of Gold3
  on Bruno
- Red19 will be ahead of Gold3
- Young plants also need protection
- **Good practice - know when and where your earliest buds break. This is your trigger point to start protection.**



What about Red19?

- Likely the same rules apply – protect early
- Budbreak is earlier than Gold3
- Budbreak to flowering is very similar to Gold3 (around 45 days)




New developments need care

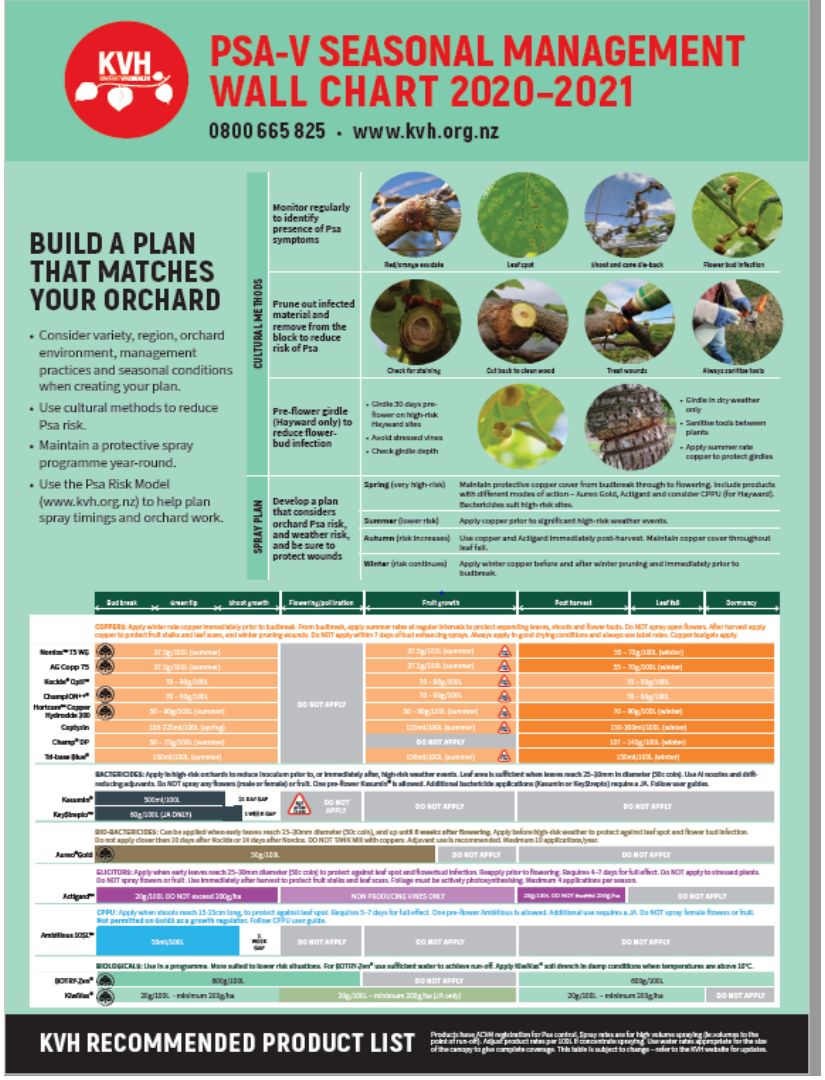
- Young plants are more susceptible to Psa
- Start Psa free – keep it that way!
- **Good practice - choose KPCS full certification plants, monitor for Psa symptoms regularly, apply a sound crop protection programme and maintain good hygiene.**

Strategies

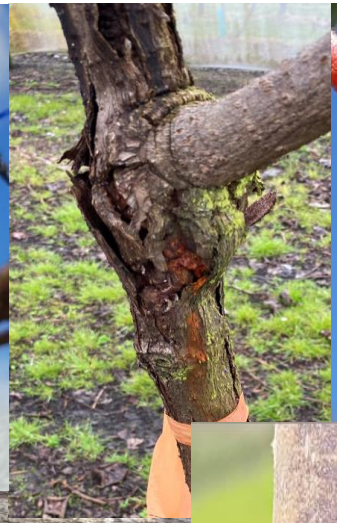
Build your plan

- Region
- Vine age and variety
- Psa inoculum levels
- Local weather
- Spray practices

Cultural control alongside a spray programme



Monitor to identify Psa risk areas



Reduce risk using cultural controls

Prune out infected material and remove from the block to reduce risk of Psa

Check for staining

Cut back to clean wood

Treat wounds

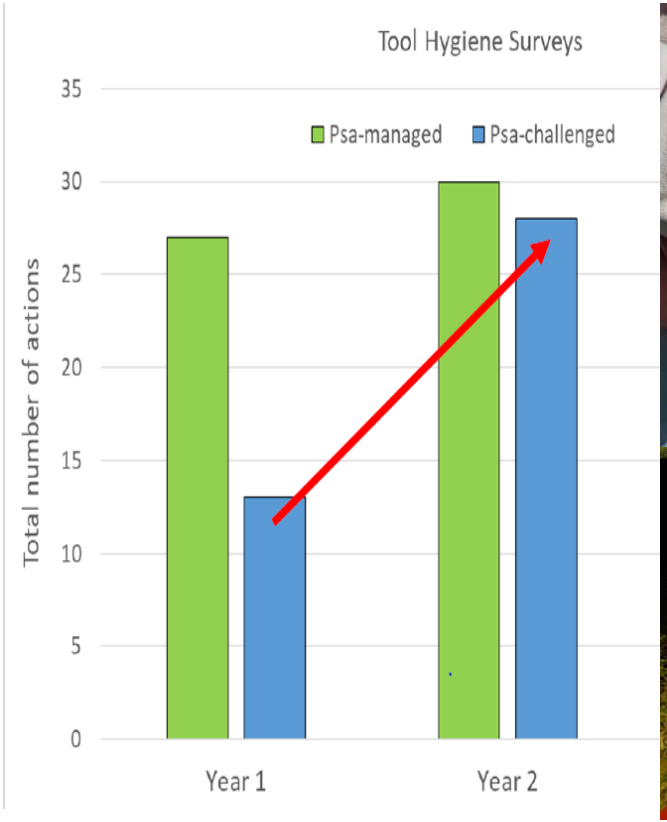
Always sanitise tools

Pre-flower girdle (Hayward only) to reduce flower-bud infection

- Girdle 30 days pre-flower on high-risk Hayward sites
- Avoid stressed vines
- Check girdle depth

- Girdle in dry weather only
- Sanitise tools between plants
- Apply summer rate copper to protect girdles

Make keeping Psa out a priority!

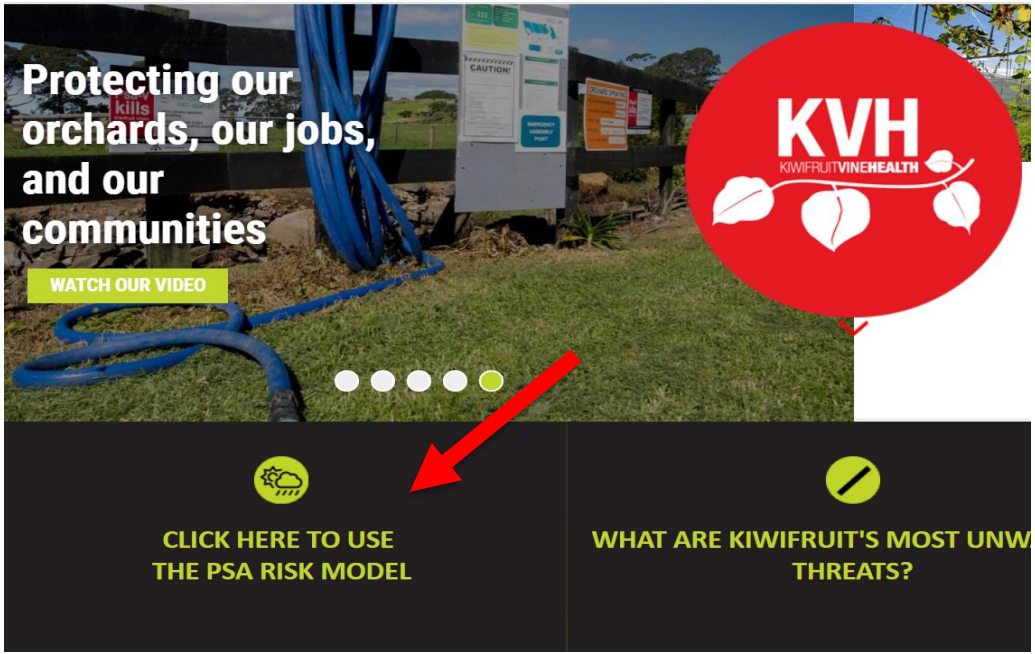


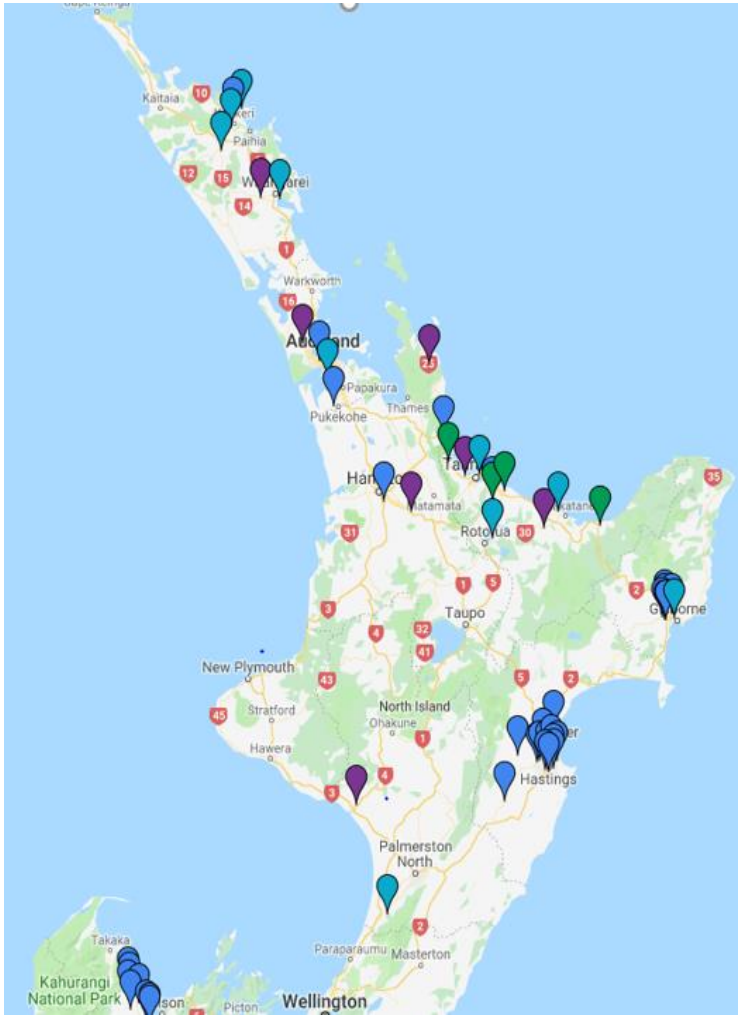
Understand your toolbox – use products wisely

	Why	Timing/Growth stage	When
Copper	Backbone - protects plant surfaces from Psa.	**Throughout Spring - cover new growth, expanding leaves and flower-buds.**	Frequency to match risk. Cover growth before high risk weather.
Bactericides	**Big hitter – to reduce inoculum in high risk orchards.**	Kasumin (1) - from 25-30 mm leaf size to 21 days pre-flower. Keystrepto (JA) – to 7 days pre-flower.	High risk weather events (pre or post).
Bio-bactericide (Aureo Gold)	Reduces leaf spot and flower bud loss. Add within a copper program option. **Safe close to flowering**.	Bud break to 6 weeks after fruit set.	Frequency to match risk – not closer than 10 days after Kocide; or 14 days after Nordox.
Actigard	**Elicits plant defence** - reduces leaf spot and flower bud loss.	25mm leaf to 7 days pre-flower.	Before infection and high risk periods (eg flowering).
CPPU	Preventative to reduce leaf spot **(not on Gold).**	When shoots reach 15-25 cm long (4-5 weeks after bud break).	Before leaf spot occurs – a preventative.
Biologicals (Botryzen and Kiwivax)	**Additional mode of action.**	Throughout Spring.	OK with copper.

Psa Risk Model -

supporting orchard decisions



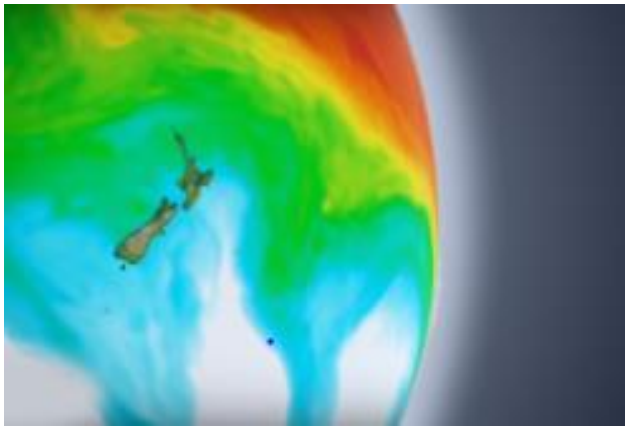


Seasonal Outlook - Sept to Nov

- Winter 2020 was warm and generally rainfall was lower than normal – some exceptions.

  NE winds and warm seas prevailed.
- Through Spring - more **North Easterlies** are expected.
- Temps are likely to be above average

  and rainfall normal (warmish and wet)



Final word

- Leave nothing to chance
- Start early…stay on track


KVH
KIWIFRUITVINEHEALTH