



PSA-V SEASONAL MANAGEMENT 2023–2024

✉ PSA@ZESPRI.COM 🔍 PSA
🖱 WWW.CANOPY.ZESPRI.COM

WHO DO I TALK TO ABOUT PSA?



• If you have questions about Psa on-orchard practices, please contact your **post-harvest technical manager** or **retailer hort rep** in the first instance.



• When you need to access current and up-to-date Psa resources, management and spray information
• Crop protection responsibilities in the CPS, monitoring and provision of justified approvals
• Continuation of Psa research as part of the Zespri Innovation Crop Protection Portfolio.



• When you need to report a potential new detection of Psa or a new spread
• Ongoing preparedness for any type of response to new variants of Psa and wider biosecurity incursions.

DEVELOP A MANAGEMENT PLAN

AUTUMN (RISK INCREASES)	Use copper and Actigard® immediately post-harvest. Maintain copper cover throughout leaf fall.
WINTER (RISK CONTINUES)	Apply winter copper before and after winter pruning and immediately prior to budbreak. Proactively remove infected material.
SPRING (VERY HIGH-RISK)	Maintain protective cover from budbreak through to flowering. Include products with different modes of action – Copper, Aureo®Gold, Actigard® and consider CPPU (for Hayward). Bactericides suit high-risk sites. Remember frost protection and consider a preflower girdle to reduce flower bud infection (Hayward and G14).
SUMMER (LOWER RISK)	Apply copper prior to significant high-risk weather events. Also consider Aureo®Gold.

PSA SYMPTOMS



Red/orange exudate



Leaf spot



Shoot and cane die-back



Flower bud infection

GOOD PRACTICE PSA MANAGEMENT



A considered spray plan



Prevention - cultural, plant and environmental considerations



Monitoring to minimise infection



Hygiene on orchard

ZESPRI WEATHER & DISEASE PORTAL

The **Psa Risk Model** - part of the Zespri Weather & Disease Portal (formally KVH) - looks at Psa risk related to weather, and uses this to inform good practice decisions on spray and orchard management.

How? Latest readings from selected weather stations provide a 14 day summary - 4 x observation, 10 x forecast - to create a *daily risk* assessment of Psa infection conditions.



Available on all devices including mobile and tablet



Have it sent direct to your email daily



← **AUTUMN** → **WINTER** → **SPRING** → **SUMMER** →

		Post-harvest	Leaf fall	Dormancy	Budbreak	Green Tip	Shoot Growth	Flowering/pollination	Fruit Growth
		COPPERS: Apply winter rate copper immediately prior to budbreak. From budbreak, apply summer rates at regular (10-14 day) intervals to protect expanding leaves, shoots and flower buds ahead of high-risk weather. Do NOT spray open flowers. After harvest apply copper to protect fruit stalks and leaf scars, and winter pruning wounds. Do NOT apply within 7 days of bud enhancing sprays. Always apply in good drying conditions and always use label rates. Max 8kg active/Ha/yr or 3kg for organics. IMPORTANT: Any application during 'fruit growth', has a 7 day pre harvest interval.							
Nordox™ 75 WG	✓	55 – 70g/100L			37.5g/100L			DO NOT APPLY	37.5g/100L
Norshield 45WG	✓	92 – 117g/100L			62.5g/100L				62.5g/100L
Kocide® Opti™		70 – 90g/100L			70 – 90g/100L				70 – 90g/100L
ChamplON++®	✓	70 – 90g/100L			70 – 90g/100L				70 – 90g/100L
Hortcare® Copper Hydroxide 300	✓	70 – 90g/100L			50 – 90g/100L				50 – 90g/100L
Coptyzin		150 – 300ml/100L			150 – 225ml/100L				125ml/100L
Tri-base Blue®		150ml/100L			150ml/100L				150ml/100L
Kasumin®		BACTERICIDES: Should only be applied in high-risk orchards and only immediately after or prior to high-risk weather events to reduce inoculum. Leaf area is sufficient when leaves reach 25–30mm in diameter (50c coin). Use AI nozzles and drift-reducing adjuvants. Do NOT spray any flowers (male or female) or fruit. One pre-flower Kasumin® is allowed. Provides 10-14 days protection. KeyStrepto™ and additional Kasumin® applications require a Justified Approval/JA. Follow user guides and label. NOTE: Future use of KeyStrepto™ in our industry is being reviewed.							
		DO NOT APPLY			500ml/100L	21 DAY GAP	DO NOT APPLY		
Aureo®Gold	✓	BIO-BACTERICIDES: Apply when early leaves reach 25–30mm diameter (50c coin), and up until 6 weeks after flowering. Apply before high-risk weather to protect against leaf spot and flower bud infection. Reapply at 7-14 days, as required. Do NOT apply closer than 10 days after Kocide or 14 days after Nordox. DO NOT TANK MIX with coppers. Adjuvant use is recommended. Maximum 10 applications/year. Do NOT exceed 4.5kg/active/Ha.							
		DO NOT APPLY			50g/100L				DO NOT APPLY
Actigard®		ELICITORS: Apply when early leaves reach 25–30mm diameter (50c coin) to protect against leaf spot and flowerbud infection. Requires 4–7 days for full effect. Reapply prior to flowering allowing 21 days between sprays. Do NOT apply to stressed plants. Do NOT spray flowers or fruit. Use immediately after harvest to protect fruit stalks and leaf scars. Foliage must be actively photosynthesising. Maximum 4 applications per season.							
		20g/100L DO NOT exceed 200g/ha	DO NOT APPLY		20g/100L DO NOT exceed 200g/ha			NON PRODUCING VINES ONLY	
Ambitious 10SL®		CPPU: Apply preventatively to protect against leaf spot. Requires 5-7 days for full effect. Apply when shoots reach 15-25cm and up until 3 weeks before first female flower opens. One pre-flower Ambitious is allowed. Use AI nozzles and drift reducing adjuvants. Ensure even coverage and Good Agricultural Practice spraying conditions. Do NOT spray female flowers or fruit. Not permitted on Gold3 or Red varieties. Not permitted as a growth regulator. Follow CPPU user guide.							
		DO NOT APPLY			50ml/100L	3 WEEK GAP	NON PRODUCING VINES ONLY		
BOTRY-Zen®	✓	600g/100L			600g/100L			DO NOT APPLY	
KiwiVax® (Limited Claim)	✓	20g/100L – minimum 200g/ha		DO NOT APPLY	20g/100L – minimum 200g/ha				

Products have ACVM registration for Psa control. Spray rates are for high volume spraying (i.e. volumes to the point of run-off). Adjust product rates per 100L if concentrate spraying. Use water rates appropriate for the size of the canopy to give complete coverage. This table is subject to change – Refer to Zespri Crop Protections Standard (CPS) for updates.

PLEASE NOTE: The information on this resource is of a general nature and not intended to apply to any specific kiwifruit orchard and/or operation. Zespri cannot guarantee the accuracy, currency, or completeness of the information, nor is Zespri liable for any steps taken in reliance on it. For specific advice about a particular orchard/operation, contact your Zespri Grower Liaison Manager, post-harvest technical manager, or other suitability qualified technical consultant. ©2023 Zespri Group Limited, all rights reserved.