

## Good management practices

*Use this as a guide (or read it out) to introduce the activity to the group:*

In this activity we will be looking at different management practices for controlling Psa and considering what are good practices that you can do on the orchard to manage Psa. These practices focus on a conventional orchard (not organic).

Each of you will be given two cards – on the card is a potential management practice. Please read the practice out loud for everyone and talk us through whether you think it is a good practice, just okay, or an unacceptable practice. Stick your card in the correct section.

Some practices will be obviously bad or unacceptable to do on the orchard – as they suggest the incorrect timing of sprays or incorrect cultural practice.

Some will be okay practices, but these could still be improved on, especially if you have an orchard at higher risk of Psa infection.

Some of the practices will be good practices that are recommended to control Psa.

For example: we know Psa removal should be done in dry weather to prevent further spread – this would be a good management practice. But cutting out Psa in wet conditions would be an unacceptable practice.

Any questions? Let's get started! 😊



## Preferred answers

Unacceptable practices	Okay management practices	Good management practices
<ul style="list-style-type: none"> <li>Actigard spray application every 2 weeks over the entire season -&gt; <i>Because manufacturer only recommends using it 4 times over the season. Should be so outrageous that growers find this one easy to categorise.</i></li> <li>During flowering, use a bactericide such as Kasumin -&gt; <i>Should not be spraying anything which could harm bees etc. over and after flowering. Can use other alternative products over flowering e.g. AueroGold up to 6 weeks after flowering.</i></li> <li>Apply sprays for the Psa spray programme regardless of weather conditions to keep with the schedule -&gt; <i>Means spraying is ineffective if weather conditions are not appropriate for drying of sprays and can result in drift etc. Best practice spraying required as not adhering to these break rules.</i></li> <li><i>Don't sanitise tools to save time-&gt;Just going to spread Psa and other pests/diseases within and between orchards!</i></li> <li>Carry out the pre-flower girdle for Hayward vines in wet and windy conditions -&gt; <i>High-risk conditions will help spread infection!</i></li> </ul>	<ul style="list-style-type: none"> <li>Apply a Psa control product every 4 weeks between budbreak and flowering -&gt; <i>Only okay for very low risk orchards, but otherwise sprays too far apart to provide protection through this very high-risk period for most orchard situations</i></li> <li>Carry out Psa monitoring and removal rounds only when symptoms are discovered on the orchard -&gt; <i>Better to be proactive and have regular rounds so you can catch symptoms before they get worse and spread</i></li> <li>Drop any Psa infected prunings in the row to be finely mulched -&gt; <i>Okay in lower risk orchards if prunings are finely mulched soon afterwards, but Psa is thought to survive on prunings for up to 5 weeks</i></li> <li>When cutting out Psa specifically, tools are sanitised between vines</li> <li>When pruning, tools are sanitised between blocks</li> <li>Use a wound protectant to cover cuts only when the KVH Risk Model predicts a high Psa risk -&gt; <i>The time of year will depend on Psa risk but better if all large cuts are treated, especially if close to leader. Most large cuts will occur doing</i></li> </ul>	<ul style="list-style-type: none"> <li>Regularly apply winter copper to blocks before and after winter pruning.</li> <li>Post-harvest application of copper and Actigard -&gt; <i>Check timing understood and risks (drift risk to fruit)</i></li> <li>Post budbreak application of Ambitious for Hayward vines -&gt; <i>Check timing and constraints understood. Maybe considered okay by group?</i></li> <li>Use a bactericide, such as Kasumin, only prior to or immediately after a high-risk period, between budbreak and flowering -&gt; <i>Bactericides good to help knock down any infection spread over a high-risk period. Okay within a window from budbreak to 21 days before flowering</i></li> <li>Apply a Psa control product every 2 weeks between budbreak and flowering -&gt; <i>Good approximation of how often, but needs to be adjusted for weather conditions</i></li> <li>Adjust the timing of spray applications depending on weather conditions, using KVH Risk Model and local weather forecast to inform the decision -&gt; <i>Rate of canopy growth is a consideration also - aim is to keep all growth covered ahead of high-risk weather</i></li> </ul>

	<p><i>higher risk times for Psa e.g. winter pruning</i></p>	<ul style="list-style-type: none"> <li>• Regular scheduled Psa monitoring and removal rounds throughout the year -&gt; <i>Plan should be tailored for orchards risk</i></li> <li>• Remove any Psa infected prunings from the orchard for disposal e.g. wheelie bin -&gt; <i>Especially at high-risk orchards</i></li> <li>• When cutting out Psa specifically, tools are sanitised between every cut -&gt; <i>Check understanding of what sanitisers are okay</i></li> <li>• When pruning, tools are sanitised between bays -&gt; <i>Okay for general pruning in low risk sites. If Psa is encountered, then sanitise between every cut</i></li> <li>• Treat large pruning cuts or Psa removal cuts with a wound protectant -&gt; <i>Consider how big a 'large cut' needs to be to be covered</i></li> <li>• When cutting out Psa, check for staining and cut back to clean wood -&gt; <i>Cultural practice</i></li> <li>• Carry out a pre-flower girdle for high-risk Hayward blocks in dry weather -&gt; <i>Correct for pre-flower girdle. What's the timing on the girdle?</i></li> </ul>
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<p>Regularly apply winter copper to blocks before and after winter pruning</p>	<p>Actigard spray application every 2 weeks over the entire season</p>
<p>Post-harvest application of copper and Actigard</p>	<p>Post budbreak application of Ambitious for Hayward vines</p>
<p>Use a bactericide, such as Kasumin, only prior to or immediately after a high-risk period, between budbreak and flowering</p>	<p>During flowering, use a bactericide such as Kasumin</p>
<p>Apply a Psa control product every 2 weeks between budbreak and flowering</p>	<p>Apply a Psa control product every 4 weeks between budbreak and flowering</p>



<p>Adjust the timing of spray applications depending on weather conditions, using KVH Risk Model and local weather forecast to inform the decision</p>	<p>Apply all sprays for the Psa spray programme regardless of weather conditions to keep with the schedule</p>
<p>Regularly schedule Psa monitoring and removal rounds throughout the year</p>	<p>Carry out Psa monitoring and removal rounds only when symptoms are discovered on the orchard</p>
<p>Remove any Psa infected prunings from the orchard for disposal e.g wheelie bin</p>	<p>Drop any Psa infected prunings in the row to be finely mulched</p>
<p>When cutting out Psa specifically, tools are sanitised between every cut</p>	<p>When cutting out Psa specifically, tools are sanitised between vines</p>



When pruning, tools are sanitised between bays	When pruning, tools are sanitised between blocks
Treat large pruning cuts or Psa removal cuts with a wound protectant	Use a wound protectant to cover cuts only when the KVH Risk Model predicts a high Psa risk
Do not sanitise tools to save time	When cutting out Psa, check for staining and cut back to clean wood
Carry out the pre-flower girdle for Hayward vines in wet and windy conditions	Carry out a pre-flower girdle for high-risk Hayward blocks in dry weather



# Unacceptable

# Psa management practices



Okay

# Psa management practices





Good

# Psa management practices

