

### Desired outcome

Regions are determined and established with appropriate geographic boundaries and secondary objectives, to ensure the best disease management approach to prevent the spread of Psa-V and minimise its impacts on kiwifruit production.

### Background

Psa-V does not affect all orchards in the same way, and the impact of Psa-V also differs across regions. Such differences reflect the disease status, the density / proximity of other kiwifruit orchards and environmental factors such as weather and altitude. To accommodate these differences and to ensure the best disease management approach is taken, the NPMP identifies three different categories of region ('Exclusion Region', 'Containment Region' and 'Recovery Region'), each with its own objectives, summarised in Table 1 below:

**Table 1: The three categories of Psa-V region and corresponding secondary plan objectives**

Category	Secondary plan objectives
Exclusion regions	<ol style="list-style-type: none"> <li>1. Ensure that exclusion regions are, and remain, free of Psa-V.</li> <li>2. Establish, on an on-going basis, that the exclusion regions are free of Psa-V.</li> <li>3. Enable swift and decisive action to be taken to contain any outbreak of Psa-V in an exclusion region.</li> </ol>
Containment regions	<ol style="list-style-type: none"> <li>4. Limit the further spread of Psa-V into, within, and from containment regions.</li> <li>5. Reduce, where possible, the distribution of Psa-V within containment regions.</li> </ol>
Recovery regions	<ol style="list-style-type: none"> <li>6. Reduce Psa-V inoculum levels in recovery regions.</li> <li>7. Reduce the risk of Psa-V spreading from recovery regions to other places.</li> <li>8. Support the recovery of kiwifruit production in the recovery regions, by minimising overall production losses and enabling the successful establishment of new kiwifruit varieties.</li> </ol>

The disease management approach is then tailored in some aspects to regional status (e.g., movement controls differ for each category of region).

The regions also serve an important purpose, being to bring together a community of growers who will take a united approach to achieve the objectives for their region. The formation of regional coordinators and groups supports this approach.

### NPMP requirements

'Establishment of exclusion regions, containment regions and recovery regions' is one of the principal measures identified in the NPMP. The relevant clause (clause 7) establishes primary and secondary criteria (set out below) that KVH must 'take into account' when deciding on the status of any given region. The NPMP requires that KVH then ensures awareness of the regions by making the type and geographic boundaries of regions publicly available on the KVH website.

The boundaries and status of regions provide a legal foundation for the rest of the plan, by setting the objectives for each region and enabling application of other measures in relation to these (e.g., movement controls and monitoring requirements).

### Criteria for setting regional boundaries

KVH consider a framework of criteria when establishing regional boundaries to ensure maximum effectiveness. Boundaries will be established in a manner that gives due consideration to the following:

1. **Alignment with disease management objectives:** Boundaries that give the best chance of achieving disease management objectives of the NPMP, considering factors such as status, proximity and density of orchards and any barriers to disease movement.
2. **Natural and man-made features:** Alignment of boundaries with natural and man-made features, such as rivers, oceans, mountains and roads, which may serve as logical boundaries that people understand and/or that make sense in terms of disease management.
3. **10km orchard buffer:** Where possible, a 10 km buffer will be maintained around outlying orchards in a region and between orchards of different regions, to improve likelihood of achieving disease management objectives.
4. **Alignment with other regional boundaries:** Alignment of boundaries with existing and well-understood regional boundaries (in particular the boundaries of established industry 'growing regions', and the commonly understood boundaries such as that of local authorities), to the extent that this assists with familiarity and avoids potential confusion.
5. **Communities of interest:** Boundaries that bring together communities of interest, such as groups of growers with established local networks and relationships, i.e. where this improves the likelihood of a successful united approach to disease management.
6. **Compliance costs:** Establishing boundaries in a manner that minimises compliance costs necessary to achieve the NPMP objectives.
7. **Longevity:** Setting boundaries that are likely to be enduring, recognising that boundaries may need to change over time if/as the disease management programme evolves, but too much change can give rise to confusion and be disruptive / undermine compliance.

### Criteria for determining regional status

The NPMP establishes primary and secondary criteria that KVH must 'take into account' when deciding the status of regions.

The primary criteria KVH must take into account are:

- an exclusion region may be established where Psa-V is not present in the region and Psa-V is not present in any place within 10 km of any boundary of that region;
- a containment region may be established where the Psa-V infection rate is, on average, less than 35% of the area of orchards in that region;
- a recovery region may be established where the Psa-V infection rate is, on average, 35% or more of the area of orchards in that region.

The secondary criteria KVH must take into account are:

- the degree of physical isolation of a particular area, and the extent to which that degree of isolation would be likely to reduce the risk of Psa-V naturally spreading to that area;
- whether there are natural barriers that reduce the risk of the natural spread of Psa-V into, within, or from a particular area;
- any other factors that would, or may, affect the levels of inoculum in a particular area, such as, the prevalence of Psa-V, the density or proximity of orchards, the particular varieties of kiwifruit plants and the levels of inoculum released by those varieties, and whether the symptoms of Psa-V are present in primary or secondary form;
- any other matters that KVH considers relevant.

### **Implementation approach for determining regional status and boundaries**

The proposed boundaries and status of regions may change over time, for example, if the disease status or situation changes in a region. The process for setting and changing the status of any given region will be managed by KVH executive, who will work with regional coordinators and groups to understand local grower perspectives, and will make a recommendation to the KVH Board that includes advice on the nature of local grower perspectives. The final decision on the boundaries and status of regions lies with the KVH Board. An up to date record of official status and boundaries will be maintained on the KVH website. KVH will notify any change to either the boundaries or status of any region or regions through 'alerts' on the KVH website ([www.kvh.org.nz/maps\\_regional](http://www.kvh.org.nz/maps_regional)) and in the KVH Bulletin, and through other industry publications where appropriate.