While olive trees are susceptible to poor drainage they're also tough and, depending on the circumstances, can survive a flood event. Image: David Anderson, Unsplash.

# Management of flooded groves

*The AOA is aware that olive groves are among the properties affected by the recent flooding in regions across the country. It's been a rare occurrence in the 20+ years since the industry was established here, so we're all wondering what the effects will be - and most importantly, whether olive trees can survive a flood. We asked industry experts what they know about the effects of flooding, and for any advice they may have for growers whose properties are, or have been, under water.*

**Paul Miller - international industry consultant, AOA Board member and former AOA President:**

"Flooding causes damage to trees if the water becomes de-oxygenated to the point where the roots die from lack of oxygen. Olive trees are susceptible to poor drainage, as we know.

"It will be a case of wait-and-see, and the extent of the damage will depend on how long the tree roots are under water and the state of that water.

"I studied flood damage to fruit trees in the Goulburn Valley more than 20 years ago and I found that peach trees that had sat in still flood water for three weeks or so survived okay once the water subsided. Peaches are also susceptible to poor drainage like olives.

"However, I have no useful experience with longer periods of flooding.

"Once the floods have subsided it will also be a case of looking at the state of the above ground part of the tree. Are there still healthy leaves? If so, it will perhaps indicate some healthy roots?

"Olive trees are tough and have reserves within the tree depending on the age of the tree. If there is a part that is alive below the ground after the flood, I would expect them to survive and grow back.

"Note their natural longevity. Here's hoping."

**Michael Thomsett - grove consultant and current AOA President:**

"Feedback is that access to groves or areas within groves has been very difficult in many regions recently. This is both from eroded roads and tracks, and also boggy soils and subsequent impacts on machinery and vehicles.

"Soil compaction with ground cover vegetation being damaged by tractor activity is also happening.

"Defoliation of older leaves in olive trees that are growing in water-logged areas of groves is common, with the amount of longer-term damage dependent on the duration of the anaerobic conditions.

"Drainage of those areas with swales, spoon drains or ag-pipe with aggregate could be a suitable solution in the longer term. Short term, management in the recovery would be foliar applications of seaweed-based products.

"Another thing to be aware of is Phytophera, a water-borne pathogen which is in the soil and can be spread around olive groves particularly in wet times. The AOA is currently investigating whether off-label permits are available for systemic fungicide products to assist in the management of this."

**Key points:**

- De-oxygenation can cause root damage/death and tree defoliation.
- Damage will depend on how long the tree roots are under water.
- Foliar applications of seaweed-based products may assist short-term with recovery.
- Mechanical drainage of affected areas will assist longer term.
- Soil compaction and damage from machinery should be avoided where possible.
- Monitor for water-borne pathogens and fungal diseases, and treat as soon as access is possible.
- Olive trees are tough: if there is a part alive after the flood, they can survive and grow back.