

AZOLLA QUICK TREATMENT REFERENCE GUIDE

There are two major species of Azolla present in Australia; *Azolla filiculoides* and *Azolla pinnata*. Both are native and can form dense mats that cover the entire water surface in freshwater systems.



Azolla filiculoides is a small, free floating freshwater fern, green to reddish-brown or purplish orange or red at the edges, branching freely, and breaking into smaller sections as it grows.

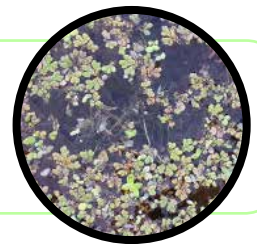


Azolla pinnata is a small free floating fern with a triangular frond measuring up to 2.5cm. They are green, blue-green, or dark red in colour and coated in tiny hairs, giving them a velvety appearance.

Primary Growth Stage

0-30% of the water body is covered in Azolla

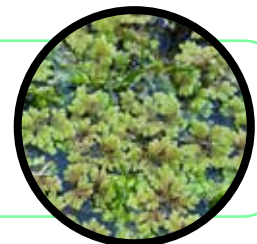
Primary growth occurs in the early stages of an infestation, when plants are not crowded.



Secondary Growth Stage

30-60% of the water body is covered in Azolla

Secondary growth occurs when the water surface is barely visible but the Azolla is still only a single layer.



Tertiary Growth Stage

60-100% of the water body is covered in Azolla

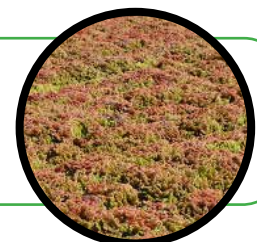
Tertiary growth occurs when the plants become crowded and mature in infestation. Overlapping is common.



Multilayered Growth Stage

100%+ of the water body is covered in Azolla (mature & overlapping growth)

Tertiary weed mats become multilayered, displaying ridge-like thickenings as layers overlap and build up.



Once you have categorised your Azolla bloom, you can then choose your treatment. Use the table below to help you:

| Growth Stage | Treatment Options | | |
|--------------|-------------------|----------------------|----------------|
| | AQ200 Herbicide | Orange Oil Herbicide | Azolla Skimmer |
| Primary | ✓ | ✓ | ✓ |
| Secondary | ✓ | ✓ | ✓ |
| Tertiary | ✓ | | ✓ |
| Multilayered | ✓ | | |

TREATMENTS AQUATIC TECHNOLOGIES OFFER:

Chemical Herbicide Treatment: AQ200 + Wetting Agent

1L of AQ200 + 500mL Wetting Agent will treat between 250m² – 500m² of surface area depending on how dense the Azolla growth is.



Tips for treatment:

- If Azolla is greater than 60% surface coverage and/or is multilayered, AQ200 is the only treatment method that will work.
- AQ200 is a 1-hit application that requires no follow up. Spot treat any new Azolla with AQ200 as needed.
- Using a gentle shower spray, spray the AQ200 + Wetting Agent evenly to make contact with the Azolla. When multilayered, make sure to well wet the Azolla with AQ200 to get good coverage.
- AQ200 is a non-residual herbicide that has a strict 10-day withholding period after use. DO NOT use the water for human consumption, irrigation, livestock watering, etc. for 10 days after application.
- In 1997, the APVMA implemented new regulations regarding the usage of Glyphosate in aquatic environments within Australia. These regulations stipulated that Glyphosate is no longer permitted for use in treating weeds that grow in or over bodies of water in Australia. Furthermore, the application of Glyphosate via spraying across open water surfaces or allowing Glyphosate to enter bodies of water is strictly prohibited. Instead, Glyphosate may only be used for the treatment of dry drains and channels, as well as the dry margins of dams, lakes, and streams. Additionally, users must ensure that water does not return to these treated areas within a 4-day period after application. Therefore, using Glyphosate herbicides in water is not permitted. Only use an approved aquatic herbicide like AQ200 in such cases.

Orange Oils: Natural Treatments

1L of Orange Oil will treat between 250² - 500m² of surface area depending on the Azolla coverage.



Tips for treatment:

- Suitable for lower level infestations up to 60% surface coverage. For large infestations greater than 60% coverage, consider AQ200 or physical removal.
- Orange Oil is a natural herbicide that won't alter the water and has no withholding period. The water can be used immediately after application.
- Orange Oil requires a minimum of 3 separate applications, on day 1, day 2, and day 4. It's advised to do several light applications, instead of a single heavy dose.

Physical Removal: Azolla Skimmers



Tips for treatment:

Physically removing Azolla from the water's surface with an Azolla Skimmer will reduce the likelihood of future blooms by decreasing the total amount of nutrients in your waterbody. Nutrient-rich water lets aquatic vegetation thrive, meaning you may experience repeat infestations of unwanted Azolla or other aquatic weeds.

Easily remove Azolla from your water body in 5 steps:

1. Toss the skimmer in the water
2. Slowly pull it back in using the string attached
3. Dump the Azolla out onto the bank or into a container for easy transport
4. Repeat
5. Follow-up spot spraying with either AQ200 or Orange Oil herbicide is recommended.