

How does the condition of lakeweed impact on the effectiveness of spraying? (*Lagarosiphon major*, *Egeria*, Hornwort)

There are a number of reasons why an application of the herbicide Diquat maybe ineffective on lakeweed.

One is because the weed is too dirty, and organic particles in the water and on the weed deactivate the active ingredient in the chemical Diquat before it can attach itself to the plant material.

In this situation the weed can still be healthy but covered in sediment. It might also seem clean after someone has swum around in the water and disturbed the sediment, but it will still be suspended in the water column and could affect the control outcome.

Below is a series of photos of weeds in varying condition. For spraying to be effective we need the weed to be in condition 1 or 2 (clean to slightly dirty) or it is likely that you will get poor results.

Dirtiness scale (1-5) for *Lagarosiphon major* shoots

- 1 – Clean healthy shoots. Ideal for diquat treatment
- 2 – Slightly dirty. Light brown organic deposits. OK for diquat treatment
- 3 – Moderately dirty. Some reduction in diquat efficacy expected
- 4 – Quite dirty. Organic deposits interconnect between leaves. High risk for diquat treatment
- 5 – Extremely dirty. Organic coating obscures species identity. Not suitable for diquat treatment



In summary, for a spray programme to be effective you need clean weed and minimal sediment suspended in the water column, this relies on a combination of environmental factors, beyond the control of lake managers.

Research continues into new spray options that could be effective against dirty weed. Any new options will need to balance environmental impacts with the threat of lakeweed to our waterways.