

Diquat FAQ References

- **Diquat is applied to potato crops at a rate of c. 1,000 parts in a million in water to remove green leaves and stems before harvest.**

[Reglone - Herbicide | Syngenta](#)

- **Diquat dibromide is registered as a herbicide for aquatic use in New Zealand.**

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- **Introduced freshwater weeds are more susceptible to diquat than the most common native freshwater plants: charophytes.**

J. S. Clayton & C. C. Tanner (1988) Selective control of submerged aquatic plants to enhance recreational uses of water bodies, SIL Proceedings, 1922-2010, 23:3, 1518-1521, DOI: [10.1080/03680770.1987.11898055](https://doi.org/10.1080/03680770.1987.11898055)

*Tanner, C.C.; Clayton J.S.; Coffey, B.T. (1990) Submerged-vegetation changes in Lake Rotoroa (Hamilton, New Zealand) related to herbicide treatment and invasion by *Egeria densa*, New Zealand Journal of Marine and Freshwater Research, 24:1, 45-57, DOI: [10.1080/00288330.1990.9516401](https://doi.org/10.1080/00288330.1990.9516401)*

Kelly, C.L.; Hofstra, D.E.; de Winton M.D. Hamilton D.P. 2012. Charophyte germination responses to herbicide application. Journal of Aquatic Plant Management 50: 150-154.

- **Chemical control is recognised as less expensive than physical removal methods.**

Netherland, M.D. 2014. Chemical control of aquatic weeds. In Biology and control of aquatic plants: a best management practices handbook. 3rd ed. Edited by L. Gettys, W. Haller, and D. Petty. Aquatic Ecosystem Restoration Foundation, USA. pp. 71–88.

Hussner, A., Stiers, I., Verhofstad, M.J.J.M., Bakker, E.S., Grutters, B.M.C., Haury, J., et al. 2017. Management and control methods of invasive alien freshwater aquatic plants: a review. Aquat. Bot. 136: 112–137. doi:10.1016/j. aquabot.2016.08.002.

- **Syngenta Crop Protection, Reglone Herbicide and Desiccant. [Salesforce](#)**
- **Typical applications of diquat for weed control result in dose concentrations of about 0.1 – 0.4 parts per million of water**

Netherland, M.D. 2014. Chemical control of aquatic weeds. In Biology and control of aquatic plants: a best management practices handbook. 3rd ed. Edited by L. Gettys, W. Haller, and D. Petty. Aquatic Ecosystem Restoration Foundation, USA. pp. 71–88.

- **The ecological risk of diquat is minimised by a very short exposure time when applied to waterbodies to control weeds. Rapid diquat dissipation from the water by binding to sediment and particulate matter means it is bioavailable for short exposure durations *in situ*.**

Ritter, A.M., Shaw, J.L., Williams, W.M., Travis, K.Z., 2000. Characterizing aquatic ecological risks from pesticides using a diquat dibromide case study. I. Probabilistic exposure estimates. Environ. Toxicol. Chem. 19, 749–759. <https://doi.org/10.1002/etc.5620190330>.

Langeland KA, Fox AM, Laroche FB et al (1994) Diquat distribution in water after application to submersed weeds. *Water Res Bull* 30:93–97

Langeland KA, Warner JP (1986) Persistence of diquat, endothall and fluridone in ponds. *J Aquat Plant Manag* 24:43–63

- **Uses of diquat dibromide as currently registered will not cause unreasonable risk to humans**

USEPA 1995. Reregistration Eligibility Decision Diquat Dibromide. [Diquat Dibromide: Reregistration Eligibility Decision \(RED\) | US EPA ARCHIVE DOCUMENT](#)

- **There are no water use restrictions for fishing and swimming following applications of diquat dibromide according to the label for product in the USA.**

Specimen label [AG Diquat Specimen Label \(alligare.com\)](#)

- **Scientific papers have concluded that diquat under realistic scenarios of use for freshwater weed control has negligible risk for survival of non-target aquatic organisms**

Breckels, R.; Kilgour. B. (2018). Aquatic herbicide applications for the control of aquatic plants in Canada: Effects to nontarget aquatic organisms. *Environmental Reviews*. 26. 10.1139/er-2018-0002.

Campbell, K.R., Bartell, S.M. and Shaw, J.L. (2000), Characterizing aquatic ecological risks from pesticides using a diquat dibromide case study. II. Approaches using quotients and distributions. *Environmental Toxicology and Chemistry*, 19: 760-774. <https://doi.org/10.1002/etc.5620190331>

Bartell, S.M., Campbell, K.R., Lovelock, C.M., Nair, S.K. and Shaw, J.L. (2000), Characterizing aquatic ecological risks from pesticides using a diquat dibromide case study III. Ecological process models. *Environmental Toxicology and Chemistry*, 19: 1441-1453. <https://doi.org/10.1002/etc.5620190529>