

Amazon frogbit

Limnobium laevigatum



A native to Central and South America, Amazon frogbit is a perennial fast-growing, floating, aquatic plant, reminiscent of a large duckweed (*Lemna minor*). Leaves generally float on the water surface, but can become emergent when the plant is crowded.

It can often be found in fishponds, aquariums and water features. This invasive aquatic plant invades and smothers waterways. It can form large dense mats of runners and adult plants can develop very quickly. It can also block waterways and irrigation channels limiting recreational activities.

Legal requirements

Amazon frogbit is not a prohibited or restricted invasive plant under the *Biosecurity Act 2014*. However, by law, everyone has a general biosecurity obligation (GBO) to take reasonable and practical measures to minimise the risks associated with Amazon frogbit under their control.

Local governments must have a biosecurity plan that covers invasive plants in their area. This plan may include actions to be taken on certain species. Some of these actions may be required under local laws. Contact your local government for more information.



Description

Amazon frogbit is a perennial floating aquatic plant that can grow up to 50 cm high.

It has bright green leaves up to 4 cm wide, are either floating or emergent and arranged in basal rosettes along runners (stolons).

Flowers are white to pale yellow, male or female, up to 13 mm wide. The flowers emerge upright, and subsequent fruit develop on the underside of the plant, in the water.

Each fruit is about 4–13 mm long, 2–5 mm wide and contains up to 100 highly viable seeds, which are less than 1 mm diameter and spherical with a rough surface. Fruit are retained on the plant but split when mature, releasing seeds which mostly sink.

Methods of spread

Amazon frogbit dispersal is by seeds and stem fragments. Floating rosettes produce runners (stolons), the ends of which grow into juvenile plants.

It can also be spread by careless dumping of unwanted plants into urban drains leading into waterways. Young plants can easily and quickly be carried along by water.

Habitat and distribution

Amazon frogbit prefers tropical to subtropical climates. It may become naturalised in dams, lakes and freshwater wetlands throughout Queensland.

The first occurrence in the Queensland environment was detected in March 2011 with establishment of the plant in a Redlands waterway adjoining an urban area.

As this plant has been sold as an aquarium plant for some time, it may be likely that encounters in waterways near urban areas throughout Queensland are a results of escapes or releases from aquariums or from garden water features.

It has also been detected in Gold Coast and Sunshine Coast waterways and a major infestation now occurs in the Baron River catchment of North Queensland.

Control

The best approach is to combine herbicide and physical control methods. The control methods should suit the specific plant and particular situation.

Herbicide control

The Australian Pesticide and Veterinary Medicines Authority (APVMA) has recently registered a herbicide for the control of Amazon frogbit in Queensland. A summary of the uses of this herbicide is listed in Table 1.

Further information

Further information may be available from your local government office, or by contacting Biosecurity Queensland on 13 25 23 or visit biosecurity.qld.gov.au.



Table 1. Herbicides for the control of Amazon frogbit

Situation	Herbicide	Rate	Comments
A. Water bodies deeper than 0.5 m with estimated water volume greater than 37.5 m³, with no physical barriers to restrict water circulation			
Control of floating invasive plants in enclosed water bodies and margins of larger open aquatic systems	CLIPPER herbicide (Flumioxazin, 15 g/tablet)	Direct tablet application High concentration Apply one tablet for every 37.5 m ³ of water to achieve active 400 parts per billion Low concentration Apply 1 tablet for every 75 m ³ of water to achieve active 200 parts per billion	Refer to general instructions and application on the product label to determine the appropriate application type
		Surface spray Including foliar application, spot spraying and clean-up sprays to control survivors from previous applications High concentration One tablet in 50 L of spray solution plus approved aquatic adjuvant/surfactant @ 0.5–1% v/v; apply 12–15 L of spray solution per 100 m ² (360–450 g a.i. per ha) Low concentration One tablet in 100 L of spray solution plus approved aquatic adjuvant/surfactant @ 0.5–1% v/v; apply 12–15 L of spray solution per 100 m ² (180–225 g a.i. per ha)	
B. Water bodies less than 0.5 m deep, or with estimated water volume less than 37.5 m³, with barriers to water circulation where direct tablet application is not practical			
Control of floating, emergent, and submerged invasive plants where direct tablet application is not practical	CLIPPER herbicide (Flumioxazin, 15 g/tablet)	Injection of spray solution 200–400 parts per billion plus approved aquatic adjuvant/surfactant @ 0.5–1% v/v	Refer to general instructions and application on the product label to determine the appropriate application type

Read the label carefully before use. Always use the herbicide in accordance with the directions on the label.

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Fact sheets are available from Department of Agriculture and Fisheries (DAF) service centres and our Customer Service Centre (telephone 13 25 23). Check our website at biosecurity.qld.gov.au to ensure you have the latest version of this fact sheet. The control methods referred to in this fact sheet should be used in accordance with the restrictions (federal and state legislation, and local government laws) directly or indirectly related to each control method. These restrictions may prevent the use of one or more of the methods referred to, depending on individual circumstances. While every care is taken to ensure the accuracy of this information, DAF does not invite reliance upon it, nor accept responsibility for any loss or damage caused by actions based on it.

