



Environmental weed risk assessment

Greater lotus (*Lotus uliginosus*)

Greater lotus (big trefoil, syn. *Lotus pedunculatus*) is a temperate perennial legume native to Europe, eastern Russia and northern Africa. It is used as a pasture species in New Zealand, the United States and Uruguay. In addition, there are about 100 000ha sown to greater lotus in coastal districts of New South Wales and Queensland. Greater lotus is typically grown on acid soils that are waterlogged for extended periods.

Greater lotus has had no commercial impact in high rainfall south-western Australia (Moore et al. 2021) and requires annual rainfall greater than 650mm and a growing season longer than 7.5 months to persist (Sandral et al. 2006). As a temperate species there is no apparent role for greater lotus in northern Western Australia.

Weed lists

National-international:

- Not listed in Weeds of Australia (398 weed species) <https://weeds.org.au/weeds-profiles/>
- “Widely naturalised in southern and eastern Australia (i.e. in south-eastern Queensland, eastern New South Wales, Victoria, Tasmania, south-eastern South Australia and south-western Western Australia).
...is widely regarded as an environmental weed in Victoria and is sometimes seen as being invasive in natural areas in South Australia, New South Wales and Western Australia. This species has been widely cultivated as a pasture legume in the temperate regions of Australia. It has escaped cultivation and become a weed of roadsides, disturbed sites, cultivated areas and natural vegetation. Greater bird's-foot trefoil (*Lotus uliginosus*) prefers moist sites and is most often found in pastures on poorly drained acidic soils. However, it also often invades grasslands, grassy woodlands, winter-wet areas, creeklines, riverbanks, swamps and wetlands” Weeds of Australia website [Fact sheet Index \(lucidcentral.org\)](#)
- In the Global Compendium of Weeds, greater lotus is listed as an environmental weed, naturalised, weed (Randall 2017).

Western Australia:

- “Grows in disturbed and cultivated areas, often winter-wet from Perth to Albany” (Hussey et al. 2007).
- Recorded as naturalised in the following IBRA Regions of WA: Swan Coastal Plain, Jarrah Forrest, Warren and Esperance (Keighery and Longman 2004).
- Not listed in Environmental weeds of Western Australia (Keighery 1991).



Figure 1 Distribution of Greater lotus (*Lotus uliginosus*) in Australia (Source: 'The Australasian Virtual Herbarium')

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Assessed using the 'Environmental weed risk assessment protocol for growing non-indigenous plants in the Western Australian rangelands' (Moore et al. 2022)

Region	Filter A	Filter B	Weed Risk Assessment rating
	Is the species a weed in similar environments in Australia or overseas?	Is the species likely to persist in the environment without management*?	
Kimberley	No	No	Negligible to low
Pilbara	No	No	Negligible to low
Gascoyne – Goldfields	No	No	Negligible to low
Agricultural area	Yes	Yes (>650mm AAR)	TBD

*Without management means no fertiliser, Rhizobia, irrigation, grazing management or control of competition from other species

References

Hussey BMJ, Keighery GJ, Dodd J, Lloyd SG, Cousens RD (2007) 'Western weeds. A guide to the weeds of Western Australia'. Second Edition. The Weeds Society of Western Australia Inc.

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Keighery G, Longman V (2004) The naturalized vascular plants of Western Australia 1: Checklist, environmental weeds and distribution in IBRA regions. *Plant Protection Quarterly*, **19(1)**: 12-32.

Moore GA, Sanford P, Dolling PJ, Real D (2021) The challenges of developing resilient perennial pastures for a Mediterranean environment—a review for Western Australia. *Crop and Pasture Science* **72**: 613-633.

Moore G, Munday C, Barua P (2022) 'Environmental weed risk assessment protocol for growing non-indigenous plants in the Western Australian rangelands', Department of Primary Industries and Regional Development, *Bulletin no. 4924*, Perth.

Randall RP (2017) 'Global compendium of weeds' (No. Ed. 3).

Sandral G, Real D, Warden J (2006) Chapter 3.1 Birdsfoot trefoil, 3.2 Greater lotus. *In* 'Perennial pastures for Western Australia'. (Ed. GA Moore, P Sanford and T Wiley). Department of Primary Industries and Regional Development, Western Australia, Perth. Bulletin 4690.

Weeds of Australia database

https://keyserver.lucidcentral.org/weeds/data/media/Html/trifolium_repens.htm Site accessed 30 November 2021

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