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Environmental weed risk assessment

Birdsfoot trefoil (*Lotus corniculatus*)

Birdsfoot trefoil is a temperate, herbaceous, perennial pasture legume native to the Mediterranean basin, Europe and parts of Eurasia and Africa. It is now cultivated in many of these areas and in parts of the United States, South America, Australia and New Zealand. Birdsfoot trefoil is more tolerant of acid soils and waterlogging but less drought-tolerant than lucerne (Sandral et al. 2006).

Birdsfoot trefoil 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 birdsfoot trefoil 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 the temperate regions of south-eastern Australia. It is common in southern and eastern New South Wales, the ACT, Victoria, Tasmania and south-eastern South Australia.
...regarded as an environmental weed in Victoria and New South Wales, and as a potential environmental weed or ‘sleeper weed’ in other parts of southern Australia. This widely cultivated pasture plant has escaped cultivation and become a weed of roadsides, disturbed sites, waste areas, coastal environs, grasslands and wetlands. In many areas it is not considered as an invasive species, but it causes problems in certain habitats (e.g. grasslands and wetlands)” Weeds of Australia website [Fact sheet Index \(lucidcentral.org\)](#)
- In the Global Compendium of Weeds, birdsfoot trefoil is listed as an agricultural weed, casual alien, cultivation escape, environmental weed, garden thug, naturalised, sleeper weed, weed (Randall 2017).

Western Australia:

- Not listed in Western weeds. A guide to the weeds of Western Australia (Hussey et al. 2007).
- Not listed in The naturalized vascular plants of Western Australia 1: Checklist, environmental weeds, and distribution in IBRA regions (Keighery and Longman 2004).
- Not listed in Environmental weeds of Western Australia (Keighery 1991).



Figure 1 Distribution of Birdsfoot trefoil (*Lotus corniculatus*) in Australia (Source: 'The Australasian Virtual Herbarium')

Environmental weed risk assessment

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	No	No	Negligible to low

*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

Assessment by G Moore and N Nazeri
January 2022

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