



Environmental weed risk assessment

Barrel medic (*Medicago truncatula*)

Barrel medic is a temperate annual pasture legume native to the Mediterranean region which is adapted to a wide range of soils from sandy loams to clays but prefers a neutral to alkaline pH ($\text{pH}_{\text{water}} > 6.5$), and not prone to waterlogging or salinity. It is more productive and persistent in low rainfall areas than subclover, but sensitive to insect damage; redlegged earth mite, lucerne flea and aphids (Howie et al. 2007).

In south-western Australia barrel medic is mainly grown on alkaline soils in the low rainfall eastern wheatbelt which are unsuited to subclover. It is also grown in subtropical environments like south-east Queensland as a winter-spring growing legume to complement summer growing grass pastures.

In experimental trials in northern Western Australia (WA) the annual legumes and herbs had good feed quality but in general, with low forage yields under irrigation, are unlikely to be economically viable (Moore et al. 2021).

Weed lists

National-international:

- Not listed in Weeds of Australia (398 weed species) <https://weeds.org.au/weeds-profiles/>
- Not listed on the Weeds of Australia website [Fact sheet Index \(lucidcentral.org\)](https://www.lucidcentral.org/fact-sheet-index/)
- In the Global Compendium of Weeds, barrel medic is listed as an agricultural weed, casual alien, environmental weed, naturalised, weed (Randall 2017).

Western Australia:

- "...Occasionally found on roadsides and in native vegetation from Shark Bay to Esperance, the eastern Goldfields and on the Nullarbor Plain close to the South Australian border" (Hussey et al. 2007).
- Recorded as naturalised in the following IBRA Regions of WA: Carnarvon, Geraldton sandplains, Yalgoo, Avon Wheatbelt, Coolgardie, Nullarbor, Mallee and Esperance (Keighery and Longman 2004).
- Not listed in Naturalised taxa recorded from conservation lands in Western Australia (Keighery 1991).

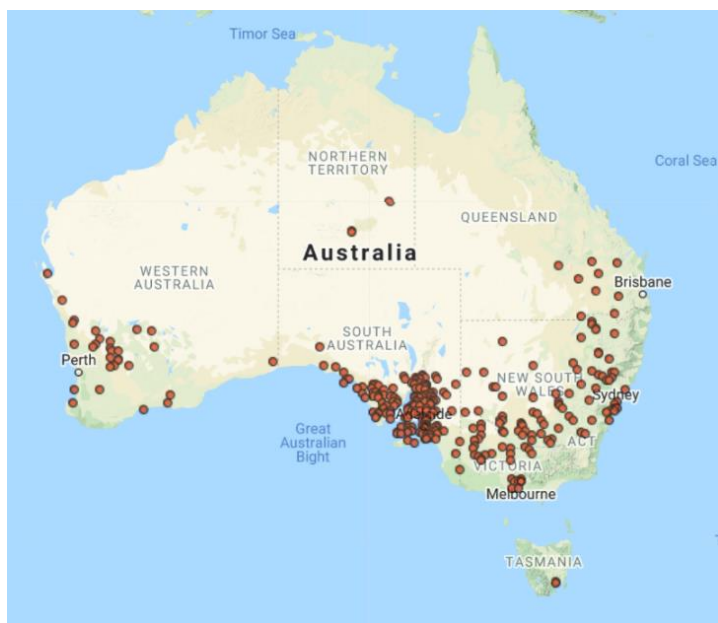


Figure 1 Distribution of barrel medic (*Medicago truncatula*) in Australia (Source: 'The Australasian Virtual Herbarium')

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	Yes	Yes	TBD

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

References

Howie J, Lloyd D, Revell C (2007) 'Medics'. Pastures Australia Fact Sheets, A collaboration between AWI, GRDC, MLA, RIRDC and Dairy Australia <https://keys.lucidcentral.org/keys/v3/pastures/Html/>

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.

Keighery GJ (1991) Environmental weeds of Western Australia. *Kowari*, **2**: 180-188.

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 G, Revell C, Schelfhout C, Ham C, Crouch S (2021) 'Mosaic agriculture: a guide to irrigated crop and forage production in northern WA', Department of Primary Industries and Regional Development, *Bulletin no. 4915*, Perth.

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).

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

Important disclaimer

The Chief Executive Officer of the Department of Primary Industries and Regional Development and the State of Western Australia accept no liability whatsoever by reason of negligence or otherwise arising from the use or release of this information or any part of it.

Copyright © Department of Primary Industries and Regional Development, 2022