

Environmental weed risk assessment

Barley (*Hordeum vulgare*)

Barley is a major cereal grain grown in temperate climates globally. It was one of the first cultivated grains, particularly in Eurasia as early as 10,000 years ago. Barley has been used as animal fodder, as a source of fermentable material for beer and certain distilled beverages, and as a component of various foods.

Barley is the second most widely grown crop in south-western Australia behind wheat. Some 40% is delivered as malting grade barley destined for the Japanese, Chinese and Indian beer markets with the remaining 60% delivered as feed grade – the majority of which is sent to the Middle East.

Barley can be successfully grown in northern Western Australia (WA) over the dry season under irrigation, and promising yields have been achieved at an experimental scale in the inland agro-climatic zones (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 in Weeds of Australia website [Fact sheet Index \(lucidcentral.org\)](https://lucidcentral.org/fact-sheet-index)
- In the Global Compendium of Weeds, barley is listed as a casual alien, weed (Randall 2017).

Western Australia:

- “.....It occurs as a weed in the south-west whenever grain is splits on road and rail verges, but does not persist” (Hussey et al. 2007)
- Not naturalised – (Swan coastal plain, Jarrah Forest, Avon wheatbelt). A planting escape like Wheat. No evidence it is naturalised” (Keighery and Longman 2004)
- Not listed in Environmental weeds of Western Australia (Keighery 1991).



Figure 1 Distribution of barley (*Hordeum vulgare*) 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.
- 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