



Environmental weed risk assessment

Wheat (*Triticum aestivum*)

Wheat is an annual grass widely cultivated for its seed, a cereal grain which is a worldwide staple food. It is the major temperate cereal grown across the grain growing areas of southern Australia and in temperate and subtropical environments around the world. Wheat cultivation goes back to ancient times and seems to originate from around the Middle East. Wheat became domesticated through cultivation of wild grains and farmers favouring traits which were beneficial for them. Traits that improve wheat quality, decrease the seed dispersal mechanism, so domesticated wheat cannot survive in the wild.

Wheat is the major grain crop produced in south-western Australia both in terms of area and value. Western Australia (WA) generates about 50% of Australia's total wheat production with more than 95% exported, predominantly to Asia and the Middle East.

Wheat could be grown in northern WA over the dry season under irrigation, but to date there is limited yield data. The most suitable wheat cultivar for the climate in the inland zones is still to be determined as conditions (latitude, temperature) are unlike any of the main cereal growing regions across Australia (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://www.lucidcentral.org/fact-sheet-index/)
- In the Global Compendium of Weeds, wheat is listed as an agricultural weed, casual alien, cultivation escape, environmental weed, garden thug, naturalised, weed (Randall 2017).

Western Australia:

- “.....It occurs on roadsides, growing from split grain, throughout the south-west, though probably not naturalised..” (Hussey et al. 2007)
- “.... Not naturalised but common on verges from spilled grain – (Geraldton Sandplains, Avon wheatbelt, Swan coastal plain, Jarrah Forest, Mallee, Esperance) (Keighery and Longman 2004).
- Not listed in Environmental weeds of Western Australia (Keighery 1991).



Figure 1 Distribution of wheat (*Triticum aestivum*) 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	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

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