



# Environmental weed risk assessment

## Annual ryegrass (*Lolium rigidum*)

Annual ryegrass (Wimmera ryegrass) is a temperate annual grass which is widely naturalized in south-western Australia.

In irrigated experiments in northern Western Australia (WA) annual ryegrass produced high-quality feed but had modest productivity over winter under subtropical conditions and as such does not appear to be a viable forage option (Moore et al. 2021).

### Weed lists

National-international:

- Not listed in Weeds of Australia (398 weed species) <https://weeds.org.au/weeds-profiles/>
- “This species is widely naturalised in southern, central and eastern Australia. It is most widespread and common in New South Wales, the ACT, Victoria, Tasmania, South Australia, and south-western Western Australia. Occasionally also naturalised in southern and central Queensland, the southern parts of the Northern Territory, and other parts of Western Australia.

Annual ryegrass (*Lolium rigidum*) is grown as a pasture grass and is also known a widespread weed of crops in the temperate regions of Australia. However, this species also invades natural vegetation and is regarded as an environmental weed in Victoria and Western Australia” Weeds of Australia website [Fact sheet Index \(lucidcentral.org\)](https://weeds.org.au/weeds-profiles/)

- In the Global Compendium of Weeds, annual ryegrass is listed as an agricultural weed, casual alien, environmental weed, naturalised, weed (Randall 2017).

Western Australia:

- “It is an important weed of crops that has developed resistance to many herbicides. Also a common widespread weed of islands, coastal sands, disturbed sites and road verges from Shark Bay to Esperance” (Hussey et al. 2007).
- Recorded as naturalised in the following IBRA Regions of WA: Carnarvon, Geraldton sandplains, Avon wheatbelt, Swan coastal plain, Jarrah Forrest and Warren (Keighery and Longman 2004).
- Not listed in Environmental weeds of Western Australia (Keighery 1991).



**Figure 1** Distribution of annual ryegrass (*Lolium rigidum*) 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*?	
<b>Kimberley</b>	No	No	<b>Negligible to low</b>
<b>Pilbara</b>	No	No	<b>Negligible to low</b>
<b>Gascoyne – Goldfields</b>	No	No	<b>Negligible to low</b>
<b>Agricultural area</b>	Yes	Yes	<b>TBD</b>

\*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](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**