

Environmental weed risk assessment

Cereal rye (Secale cereale)

Cereal rye (also called ryecorn, rye) is a minor cereal crop commonly grown on low fertility sandy soils and also for erosion control. Rye grain is refined into a flour and to make alcoholic drinks. It is also used for animal fodder.

Cereal rye could be grown in northern Western Australia (WA) over the dry season under irrigation, but it is more sensitive to high temperatures than oats or barley and its main attributes of winter hardiness and growth on poor sandy soils limit its potential role (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 <u>Fact sheet Index (lucidcentral.org)</u>
- In the Global Compendium of Weeds, cereal rye is listed as an agricultural weed, casual alien, cultivation escape, environmental weed, garden thug, naturalised, noxious weed, sleeper weed, weed (Randall 2017).

Western Australia:

- "A sterile hybrid is extensively used for sand-binding in construction areas and is commonly encountered around Perth, but not truly naturalised" (Hussey et al. 2007).
- Not naturalised Sterile cover crop, frequently planted on the Swan coastal plain (Keighery and Longman 2004).
- Not listed in Environmental weeds of Western Australia (Keighery 1991).



Figure 1. Distribution of cereale rye (*Secale cereale*) 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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