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Puccinellia ciliata - environmental weed risk assessment 2022

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Environmental weed risk assessment

Puccinellia (*Puccinellia ciliata*)

Puccinellia is a moderately salt-tolerant and moderate to highly waterlogging tolerant perennial grass native to Turkey. It was introduced into Western Australia (WA) by CSIRO in the early 1960s as a pioneer plant for revegetating saltland and has been widely sown in south-western Australia to revegetate saline land. The relatively poor production on WA soils may be due to the combination of low pH and low availability of calcium as puccinellia appears to prefer alkaline, calcareous soils (Moore et al. 2006).

As a 'resurrection' perennial grass which is green in winter and dry in summer there is no apparent role for puccinellia in northern WA.

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, puccinellia is listed as an agricultural weed, environmental weed, garden thug, naturalised, sleeper weed, weed (Randall 2017).

Western Australia:

- "...Widely planted for salt land reclamation and established on saline sites, including road and rail verges, throughout the wheatbelt and at the Nornalup Inlet" (Hussey et al. 2007).
- Recorded as naturalised in the following IBRA Regions of WA: Avon wheatbelt, Jarrah forest, Warren and Esperance (Keighery and Longman 2004).
- Not listed in naturalised taxa recorded from conservation lands in Western Australia (Keighery 1991).



Figure 1 Distribution of puccinellia (*Puccinellia cilliata*) 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	Yes	TBC

*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 GA, Sanford P, Wiley T (2006) Perennial pastures for Western Australia. Department of Primary Industries and Regional Development, Western Australia, Perth. *Bulletin no. 4690*.

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

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