2022

Cichorium intybus - environmental weed risk assessment 2022

Department of Primary Industries and Regional Development, Western Australia

Department of
Primary Industries and Regional Development

GOVERNMENT OF WESTERN AUSTRALIA

Environmental weed risk assessment

Chicory (*Cichorium intybus*)

Chicory is a short-term (two to five years) perennial pasture herb native to Europe, temperate and tropical Asia and North Africa. It has been cultivated as both a summer forage and as a 'coffee substitute' for centuries and was introduced into Australia in the 19th century.

In experimental trials in northern Western Australia (WA) the annual legumes and herbs had good feed quality but in general, with low forage yields under irrigation, are unlikely to be economically viable. Chicory has also been evaluated at north Broome under irrigation and was persistent through the hotter summer months. It warrants further evaluation, but low biomass production is likely to be a constraint (Moore et al. 2021).

Weed lists

National-international:

- Not listed in Weeds of Australia (398 weed species) https://weeds.org.au/weeds-profiles/
- "Chicory is primarily seen as a weed of agricultural areas (i.e. crops and pastures), roadsides and disturbed sites, it can spread from these habitats into disturbed native grasslands, rangelands and open woodlands. It is therefore occasionally regarded as an environmental weed in Victoria, South Australia, New South Wales, Tasmania, and Western Australia. During a recent survey, chicory (*Cichorium intybus*) was listed as a priority environmental weed in at least one of Australia's Natural Resource Management regions." Weeds of Australia website Fact sheet Index (lucidcentral.org)
- In the Global Compendium of Weeds, chicory is listed as agricultural weed, casual alien, cultivation escape, environmental weed, garden thug, naturalised, noxious weed, weed (Randall 2017).

Western Australia:

- "Chicory has escaped from gardens to roadsides and wasteland-often on calcareous soil from Perth to Bunbury and is also occasionally seen in the western wheatbelt" (Hussey et al. 2007).
- Recorded as naturalised in the following IBRA Regions of WA - Avon wheatbelt, Swan coastal plain, Jarrah Forrest, Coolgardie, Warren (Keighery and Longman 2004)
- Not listed in Environmental weeds of Western Australia (Keighery 1991).

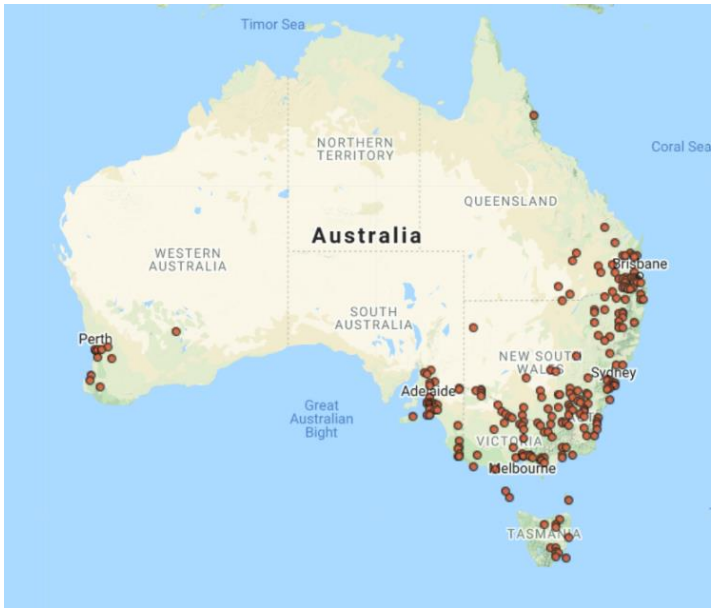

Figure 1 Distribution of Chicory (*Cichorium intybus*) in Australia (Source: 'The Australasian Virtual Herbarium')

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	Yes	Yes	**TBD**

*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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January 2022

Important disclaimer