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Cicer arietinum - environmental weed risk assessment 2022

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Environmental weed risk assessment

Chickpeas (*Cicer arietinum*)

Chickpeas are a widely cultivated annual pulse crop used for human consumption and as animal feed. They have been cultivated for thousands of years in the Middle East and most likely were first domesticated in what is now modern-day Turkey. There are two groups, the desi and kabuli types, which are differentiated by seed size, shape and colour. The small-seeded, desi type accounts for 85 to 90% of the world's production.

In Western Australia (WA), 'desi' chickpeas are grown in the eastern wheatbelt as a break crop on medium- to fine-textured soils with $\text{pH}_{\text{Ca}} > 5.5$, while 'kabuli' chickpeas are grown in the Ord River Irrigation Area with between 400 and 1000ha grown per annum. Chickpeas are susceptible to a range of fungal diseases, the most significant in WA is ascochyta blight.

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 \(lucidcentral.org\)](#)
- In the Global Compendium of Weeds, chickpeas are listed as casual alien, cultivation escape, naturalised, weed.

Western Australia:

- Not listed in western weeds (Hussey et al. 2007)
- Not listed in The naturalized vascular plants of Western Australia 1: Checklist, environmental weeds and distribution in IBRA regions (Keighery and Longman 2004)
- Not listed in Environmental weeds of Western Australia (Keighery 1991).



Figure 1 Distribution of *Cicer arietinum* species 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	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.
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- 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

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