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Vicia sativa - environmental weed risk assessment 2022

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Environmental weed risk assessment

Vetch, common vetch (*Vicia sativa*)

Common vetch is a sprawling, climbing annual legume which has been grown in the Middle east and Europe since ancient times. It is a versatile legume for pasture, green manure, hay/silage and grain. Two subspecies are recognized: narrow-leaved vetch (*Vicia sativa* subsp. *nigra*) and common vetch (*Vicia sativa* subsp. *sativa*).

Vetch is susceptible to a range of diseases (rust, Ascochyta) and insects (red-legged earth mite, lucerne flea, blue green aphid, cowpea aphid and Heliothis). Plants infected by rust can cause abortion in pregnant ruminant animals. Common vetch is a minor pasture species in south-western Australia.

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. However, vetch has a larger seed and much faster early growth than the small-seeded annual clovers and serradella. Production in experimental trials to date has been modest, but vetch may have potential as a green or brown manure crop in an annual rotation to improve the soil and to boost organic matter content (Moore et al. 2021).

Weed lists

National-international:

- Not listed in Weeds of Australia (398 weed species) <https://weeds.org.au/weeds-profiles/>
- “Widely naturalised in Australia, but most common and widespread in the southern parts of the country (i.e. in many parts of New South Wales, in the ACT, Victoria and Tasmania, in the south-eastern and southern parts of South Australia, and in south-western Western Australia). Occasionally also naturalised in the cooler parts of south-eastern Queensland.

Narrow-leaved vetch (*Vicia sativa* subsp. *nigra*) Common vetch (*Vicia sativa* subsp. *sativa*) are regarded as environmental weeds in Victoria and Western Australia” Weeds of Australia website [Fact sheet Index \(lucidcentral.org\)](https://weeds.org.au/fact-sheet-index/)

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

Western Australia:

- “.....Widespread in paddocks, disturbed areas such as wastelands and roadsides, wetlands and woodlands from Perth to Augusta and Albany” (Hussey et al. 2007)
- “*Vicia sativa* subsp. *nigra* (Common Vetch) recorded as naturalised in the following IBRA Regions of WA- Swan coastal plain, Jarrah Forest, Avon wheatbelt, Warren, Coolgardie, Nullarbor. *Vicia sativa* subsp. *sativa* (Common Vetch) recorded as naturalised in the following IBRA Regions of WA -Avon wheatbelt, Swan coastal plain, Jarrah Forrest, Warren” (Keighery and Longman 2004)
- Not listed in Environmental weeds of Western Australia (Keighery 1991).



Figure 1 Distribution of vetch (*Vicia sativa*) 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

Assessment by G Moore and N Nazeri
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