



Environmental weed risk assessment

Subterranean clover (*Trifolium subterraneum*)

Subterranean clover is a grazing tolerant annual pasture legume from the Mediterranean Basin which is sown over 8 million hectares (ha) in Western Australia (WA) and 29 million ha across southern Australia. It is used in permanent pastures and in rotation with crops.

A range of cultivars are available for areas adapted to ranging from 275 to 1200mm annual average rainfall. Subspecies *subterraneum* is adapted to well-drained, moderately acidic soils. Subspecies *yanninicum* is suited to moderately acidic soils with poor drainage. Subspecies *brachycalycinum* is best suited to neutral-alkaline, cracking or stony soils and generally fails to persist in WA.

In experimental trials in northern 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 (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 southern and eastern Australia (i.e. in south-eastern Queensland, southern and eastern New South Wales, the ACT, Victoria, Tasmania, many parts of south-eastern and southern South Australia and the southern and western parts of Western Australia).

Subterranean clover (*Trifolium subterraneum*) is regarded as an environmental weed in Western Australia and Victoria” Weeds of Australia website [Fact sheet Index \(lucidcentral.org\)](#)

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

Western Australia:

- “Widely naturalised on roadsides and wasteland, around granite rocks and in swamps throughout the south-west from Geraldton to Esperance” (Hussey et al. 2007)
- Recorded as naturalised in the following IBRA Regions of WA: Geraldton sandplains, Avon wheatbelt, Swan coastal plain, Jarrah forest, Mallee, 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 Subterranean clover (*Trifolium subterraneum*) 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	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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