

# Environmental weed risk assessment

## Maize (*Zea mays*)

Maize (corn) is a tall, annual warm season (C4) grass grown for grain or silage. The first domestication of maize was by the indigenous people of southern Mexico, and it has been cultivated for thousands of years in central and southern America.

Maize is a staple food in many parts of the world, with the world production of maize surpassing that of wheat or rice. In addition to being consumed directly by humans, maize is also used for biofuels (corn ethanol), animal feed and other maize products, such as corn starch and corn syrup. Maize is a monoecious plant, as it has separate male and female flowers on the same plant. The tassel or male flower produces pollen, while the ear with silks (female flower) produces ovules that become the seed or kernels.

Maize is a highly domesticated crop species that does not exist outside of cultivation. The maize varieties grown commercially are hybrids and the kernels do not separate from the cob, so the risk of natural dispersal is negligible. Casual or volunteer maize is only found in areas associated with the cultivation, storage, and transport of maize seeds and grain, and other products that may be contaminated with maize seed.

In northern Western Australia (WA), maize is successfully grown as a dry season crop under irrigation in both the Ord River Irrigation Area and in the west Kimberley under irrigated mosaic agriculture for feeding cattle (Moore et al. 2021).

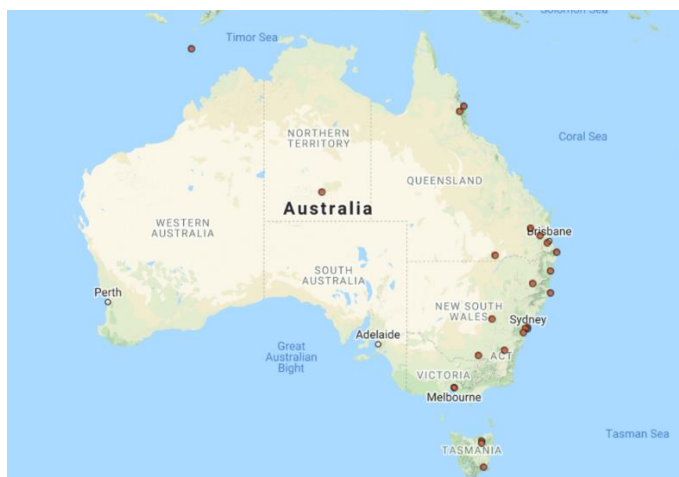
### Weed lists

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 \(lucidcentral.org\)](https://lucidcentral.org/fact-sheet-index)
- In the Global Compendium of Weeds, maize is listed as an agricultural weed, casual alien, cultivation escape, garden thug, naturalised, weed (Randall 2017).

Western Australia:

- Not listed in Western weeds. A guide to the weeds of Western Australia (Hussey et al. 2007).
- Not listed in 'The naturalized vascular plants of Western Australia (Keighery and Longman 2004).
- Not listed in Environmental weeds of Western Australia (Keighery 1991).



**Figure 1** Distribution of Maize (*Zea mays*) 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*?	
<b>Kimberley</b>	No	No	<b>Negligible to low</b>
<b>Pilbara</b>	No	No	<b>Negligible to low</b>
<b>Gascoyne – Goldfields</b>	No	No	<b>Negligible to low</b>
<b>Agricultural area</b>	No	No	<b>Negligible to low</b>

\*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](https://keyserver.lucidcentral.org/weeds/data/media/Html/trifolium_repens.htm) Site accessed 30 November 2021

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