

Coolatai grass (*Hyparrhenia hirta*)

Weed management guide

Weed type
Grass

November 2022

www.lls.nsw.gov.au/regions/central-west



In NSW, weeds are regulated by the NSW Biosecurity Act, 2015. All land managers have a General Biosecurity Duty to contain the spread of weeds.

“General Biosecurity Duty means that any person dealing with plant matter must take measures to prevent, minimise or eliminate the biosecurity risk (as far as is reasonably practicable).”

The Regional priority for Coolatai grass is to protect assets from the weed’s impacts and to prevent its arrival and establishment in the region. In order to achieve this, Land Managers are asked to: *Mitigate the risk of new weeds being introduced to their land and reduce impacts on priority assets. The plant should not be bought, sold, grown, carried or released into the environment.*

For further information, contact your local Biosecurity (Weeds) Officer via Central West Local Land Services or visit NSW WeedWise.

NSW WeedWise



Habit and description

Coolatai grass is a tussock-forming perennial native to the Mediterranean region. It can grow to 1.2m tall and has blue-green leaf blades. Leaves can be harsh to touch and turn orangey-red in winter after frost. Their inflorescence is branched, ending in a pair of hairy spikes, which can appear 'fluffy' when dry. Coolatai grass is summer flowering and can grow in a range of soils but prefers light textured. It can however, grow in heavy clays if they are not waterlogged.



Photo: © John Hosking | NSW DPI



Photo: © S. Warner | NSW DPI



Photo: © Donna Smithyman | NSW DPI

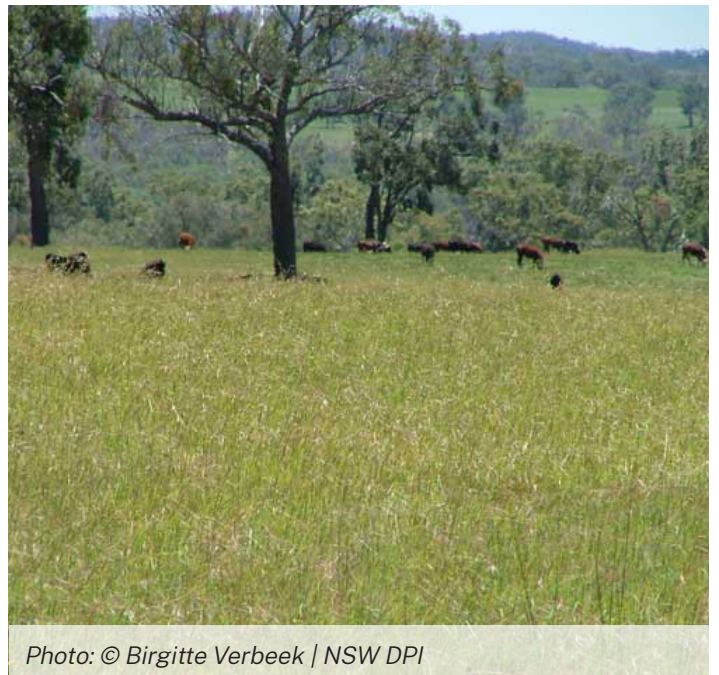


Photo: © Birgitte Verbeek | NSW DPI

Reproduction and spread

Coolatai grass spreads primarily using seed which can be actively spread by mowing or water movement (Noble 2010). The seeds possess tiny hairs allowing them to adhere to clothing, animals, vehicles and machinery. As Coolatai grass is self-fertile, reproduction can occur even if there is only one mature plant. Seeds are capable of germinating at a depth of up to 9 m and in areas with dense leaf litter (Noble 2010). The seed bank is short-live however, and there are no seed dormancy mechanisms for the species (Chejara et al. 2019).

Impacts

Agriculture



- Coolatai grass readily invades and dominates pastures due to grazing regimes.
- Failure to manage a pasture dominated in Coolatai grass can result in a monoculture which has low digestibility and protein.
- This can result in poor sheep production.
- Supplementary nutrients will be required for cattle to be able to utilise the feed.

Native vegetation



- A great risk to biodiversity as it can cause fragmentation of native vegetation as it readily invades undisturbed ecosystems.
- Coolatai grass can rapidly establishes in disturbed and degraded ecosystems.
- Established plants are drought tolerant.
- Forms dense, impenetrable thickets that outcompete native vegetation.
- Once established, it can be difficult to control and negatively impact native birds and fauna.

Management

Chemical









- Coolatai grass can tolerate most herbicides and will likely only result in a reduction of growth, not eradication.
- Avoid using herbicide after fire or slashing as it can reduce the effectiveness.
- Seek the guidance of an experienced Weeds Officer for expert advice on herbicide use.
- Visit www.apvma.gov.au for a list of registered products, product labels and permit requirements.
- NSW DPI (2018) provides a list of recommended herbicides for the control of Coolatai grass at <https://weeds.dpi.nsw.gov.au/Weeds/CoolataiGrass>.

Non-chemical



- Mowing and slashing can help to reduce biomass of larger infestations but can actively disperse seeds and reduce effectiveness of herbicides by limiting active growth.
- Machinery hygiene is very important to reduce the spread of infestations.
- Competitive pastures with more than 70% ground cover can resist Coolatai grass invasion.
- Rotational grazing can help produce competitive pastures with high ground cover.

Management calendar

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
 Life cycle												
 Flowering	[Green bar]			 Seed dispersal						 Flowering		
 Germination and growth										[Green bar]		
 Management tools	<p>Plants can be controlled by brush cutting throughout the year to control biomass.</p> <p>Mechanical removal can actively spread seeds. Using a catcher can reduce the spread as well as correct vehicle hygiene practices.</p> <p>Rotational grazing can be used to promote competitive pastures and limit invasion. Seedlings are weak and easily controlled by grazing.</p> <p>Herbicide application is most effective when plants are actively growing.</p>											

Optimal control options may vary depending on your location and climate. Consult an experienced Weeds Officer based in your local government area for control methods suited to your conditions.

All herbicides must be used in accordance with the herbicide label and permit requirements.

Further information

For more information on your general biosecurity duties, visit www.dpi.nsw.gov.au/biosecurity.

For the best guidance on how to meet this duty on your property, contact your expert Weeds Officer at your local council or via Local Land Services www.lls.nsw.gov.au/regions/central-west.

NSW WeedWise



References

- Chejara, V. K., Kristiansen, P., Whalley, R. D. B. (Wal), Sindel, B. M., Nadolny, C., Chejara, V. K., Kristiansen, P., Whalley, R. D. B. (Wal), Sindel, B. M., & Nadolny, C. (2019). *The role of seedbanks in invasions by Hyparrhenia hirta (L.) Stapf in Australia*. The Rangeland Journal, 41(5), 383–392. <https://doi.org/10.1071/RJ19039>
- Noble, J. (2010). *Coolatai grass (Hyparrhenia hirta) control at Cobbler Creek Recreation Park*. Plant Protection Quarterly, 25(4), 188.
- NSW DPI. (2021). *NSW WeedWise*. <https://weeds.dpi.nsw.gov.au/Weeds/CoolataiGrass>

Warrumbungle, Gilgandra,
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