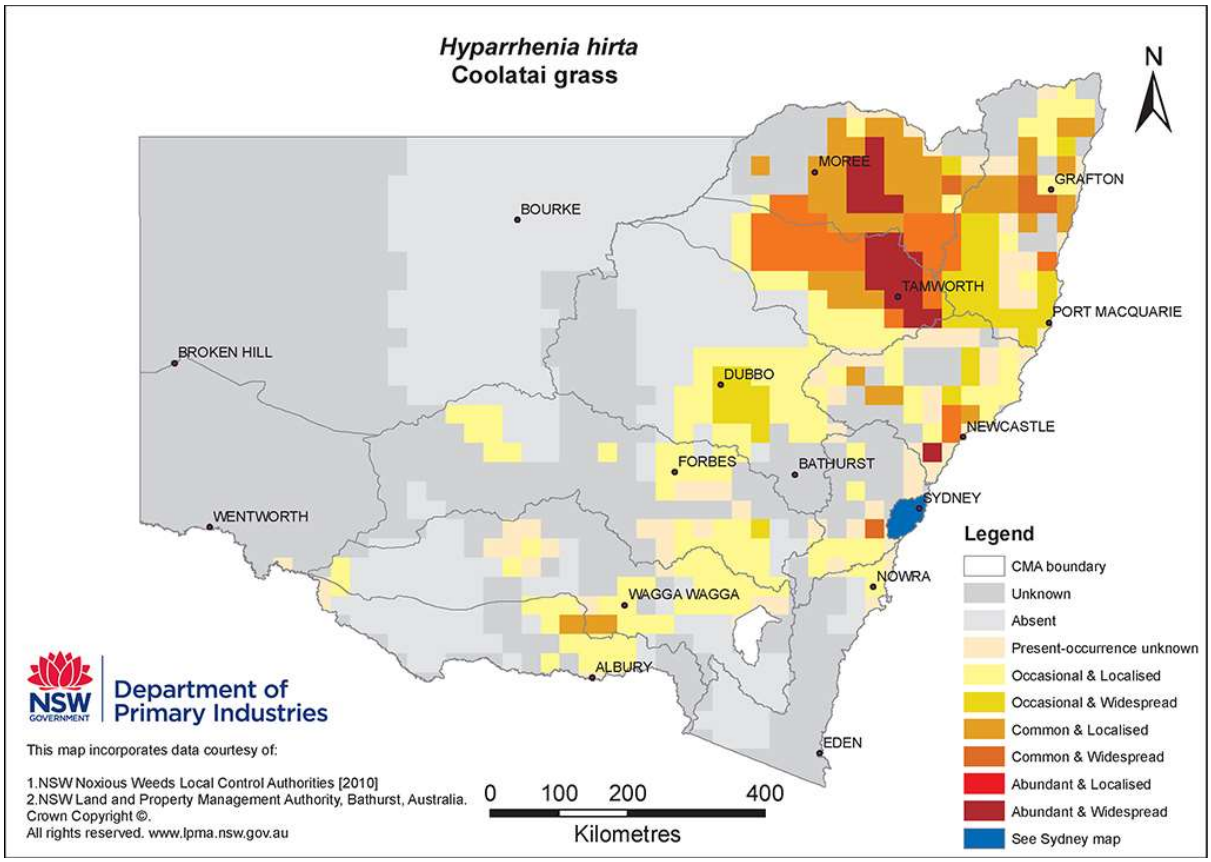
Not So Cool

The impact of Coolatai Grass on bushland in North West NSW

Unlike the terrific town of Coolatai that has (among other things) the annual vintage tractor pull and excellent burgers, the grass *Hyparrhenia hirta* (Coolatai Grass) hails from temperate Africa. Coolatai Grass is a highly invasive species that expands across dense swathes to displace other ground cover plants and is well documented as one of the most destructive weeds in the North West landscape [(1)].

Coolatai Grass has a stronghold in our Region from Gwydir down to Tamworth, and increasingly common and widespread across the Plains. An alarming rate of spread can readily be seen along roadsides and into Travelling Stock Reserves throughout the Region and is thought to be so fast that surveys and research conducted periodically (such as this map from 2010) are unable to keep up with the weeds rapid seizure of land.



The issue

One impact is that the dense tussocks and large bulk fuel load also play a role in carrying fire into bush areas that is too frequent and/or too hot for natives otherwise well adapted to fire. [(4)]

In addition to pasture damage this single plant species dominating bushland is highly destructive because it is one of the few perennial grasses capable of invading undisturbed natural areas where it eliminates:

- Food: especially for birds [nectar and insect eaters], insects [ants, moths/butterflies, and wasps], spiders, small marsupials, amphibians, microorganisms.

- Safety: the cover offered providing safer feeding and resting sites.
- Shelter: providing nest-building materials and sheltered breeding sites.
- Seasonal availability: many other plants flower in winter when other nectar sources are not available. [3]

The insects and animals then provide pollination, nutrient recycling services and pest insect control (especially beetle and caterpillar populations that are out of control) are lost. A diverse range of different ground cover plants provide a balance between predator and prey, not provided when there is little/no understorey.

The genie is already out of the bottle

In situations where Coolatai Grass is dominant the control options such as grazing management or herbicide use is unlikely to reduce its presence [2] and management strategies of rotational grazing, spring burning and/or slashing will be essential [5]. In areas suitable for cropping, 2 - 3 years of crop will control Coolatai Grass. A competitive pasture should then be re-established.

Fire alone is not a good control agent for weedy perennial tussocks and particularly Coolatai Grass because of its ability to regerminate very quickly after the fire and fill gaps ahead of most other desirable plants, [4] in other words fire could work in favour of Coolatai Grass in the long run.

The greatest problem with invasive species is the lack of early detection and management. Grasses are particularly difficult because they look innocuous and rarely raise land managers' attention until the species is well established.

Caption: Coolatai grass spreads readily along roadsides, infesting adjacent native pasture.
Photographer: Birgitte Verbeek

Caption: Coolatai grass tussock
Photographer: Andrew Storrie

Caption: Paired racemes of Coolatai grass are a key distinguishing feature
Photographer: Birgitte Verbeek

Caption: Key identifying features of Coolatai grass
Photographer: John Hosking

Protect valuable assets

Invasion of native plant communities by exotic perennial grasses was listed as a Key Threatening Process under the Threatened Species Conservation Act 1995 [12 September 2003] and Coolatai Grass even gets a specific mention [(6)].

Bushland and other valuable areas not yet overrun by Coolatai Grass have management options available. The strategic approach is identifying a manageable area for ongoing treatment. Starting with the least infested areas the focus is on protecting it by eliminating clumps and any new intruders, and progressing outwards towards edges or susceptible areas. The control methods are spot spray and chipping with follow ups required over 2-3 years so it is important to limit the area to something you can handle.

A small Asset Protection area has a much higher chance of success and is increasingly valuable as invasive weeds continue to spread and displace biodiversity.

For more information:

References

(1) Biodiversity Priorities for Widespread Weeds, NSW Dept of Primary Industries, 2011.
(2) Management for Coolatai Grass on the North West Slopes, NSW Agriculture, 2002.
(3) The Value of Understory, Landcare Learnings, Nell Chaffey, Tamworth Regional Landcare, unpublished paper, 2021.
(4) Fire and the Vegetation of the Border Rivers-Gwydir Region, Hotspots Fire Project, NSW Rural Fire Service, Nature Conservation Council. 2014.
(5) https://weeds.dpi.nsw.gov.au/Weeds/Details/179#control , WeedWise, NSW DPI, Reviewed 2018
(6) https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=20018 , NSW OEH, Invasion of native plant communities by exotic perennial grasses - profile