



UPPER RIVER TORRENS  
LANDCARE GROUP



# Data Sheet

# Perennial Native Grasses

## Grassland Establishment and Management

*Native grasses are accepted to be those that were here prior to colonisation. There are 20 groups (genera) of both cool-season active and warm-season active native grasses across the Mt Lofty Ranges.*

***Many native grasses are deep-rooted, acid soil tolerant perennial grasses. The fact that many are year-long green perennials makes our understanding of them an important part of our agricultural, biodiversity and fuel load reduction practices.***

Current pressures and future needs demand that farming becomes sustainable. Native grasslands are classed as **low** input pastures. They do not need to be replaced on a 5-7 year cycle as do improved pastures, however they still need to be managed.

The awareness of their growth patterns is one of the keys to management. They subsist through autumn to spring and will sustain mature non-breeding animals. They grow vigorously through late spring and summer, their seed set period.

In the Adelaide Hills, the 'exotics' are shutting down for summer just as the 'natives' are coming on. In a dry season they can be not only the protectors of our topsoil, habitat, and feed for native fauna but also the emergency feed area for limited periods in a harsh summer.

The nutritional value of native grasses, especially Weeping rice-grass and the Wallaby grasses, has been well documented from as early as the 1980's

interstate to recently in South Australia. (Foster, Reseigh and Myers (2009).

Their role as ground stabilisers in native woodland and 'rough' grazing areas is now well understood. Their relatively low growing forms and lack of dense, dry thatch make them an ideal maintenance proposition.

To recognise them, it helps if you are familiar with and can identify introduced pasture grasses and annual grass weeds.

### **Harvesting, cleaning, and establishment techniques (hand and machine)**

John Stafford (Vegetation Management Services) was the first to adapt and use a comb & reel harvester. Seeding Natives Incorporated, an innovative environmental not-for profit organisation that specialises in the ecological restoration/reconstruction of native grasslands, use a variety of brush and vacuum harvesters.



Bob Myers harvesting with a small brush harvester

Hand sieving, winnowing and commercial cone threshers are just some of the cleaning options. Super spreaders, modified sod seeders and purpose-built chaffy seed dispersal machines are currently used for sowing. Seeding Natives utilise a highly engineered and innovative direct seeding machine. It maximizes seed to soil contact to enhance germination & establishment. Hydro-mulching, seed coating and hydroseeding are other methods practiced in soil stabilization works.

### How to grow native grasses

- Encourage existing native grasses by spot poisoning or pulling exotic weed species to reduce competition and enable recruitment of the natives. If natives drop below 30% in a pasture, they are in jeopardy. (Proceedings of the Annual Conference of the Grassland Society of Victoria, 1993)
- Identify seed sources on your property and hand-harvest. Develop your own nursery beds or increase the extent of your remnants by sowing around them. A Weeping rice-grass lawn would be an excellent seed source; there are ground-hugging forms of this grass.
- Collect native seed as it ripens. (C<sub>3</sub>-cool season-active species in spring; C<sub>4</sub>-warm season-active species in summer). Weeping rice-grass will continue to seed over an extended period (almost to autumn), especially if it is accessing a bit of moisture, or is shaded.
- Direct seeding is the most effective and efficient way of establishing most native grasses.

### Grazing management and/or weed control

Several factors must be considered when grazing native grasses: timing, selectivity, intensity, and duration.

Different native grass species can withstand varying amounts of defoliation, but all species need time to replenish themselves. Therefore, native grasses should be grazed appropriately (contact Seeding Natives for advice), and then rested during flowering and seed production (late spring to early summer). Reducing selectivity is important for maintaining the species composition of native grasslands. This can be undertaken by high intensity grazing for short periods of time with appropriate paddock rotations and long rest periods.

A more diverse variety of native grasses will keep weeds to a minimum and allow plants to recover more quickly from grazing. Quarantining livestock in a weed-free area before moving them onto native grasslands will also help control weeds. Results of grazing trials at Harrogate and Clare are available from the Native Grass Resources Group Inc and the latter from the Mid North Grasslands Working Group.

### A few native grasses found near watercourses

*Poa labillardieri* var. *labillardieri* (a tussock grass) and *Microlaena stipoides* var. *stipoides* (weeping rice-grass) are commonly near water, as well as the spring-summer annual *Lachnagrostis filiformis* (a blown grass) and *Amphibromus* spp (swamp wallaby-grass).

Apart from the last two, the others illustrated can be found in the buffer and catchment zones. NB Watercourses attract and encourage introduced weeds, making it challenging to maintain native grasses there.

Refer to the Information sheet - Analysis of green Warm Season Native Pasture in Section 2.6 Soils and Pastures for additional information on the nutritional value of native grasses.



Seeding Natives' innovative multi species native grassland seeder

## References

**Broadhurst, L et al.** (2008). Seed supply for broadscale restoration: Maximizing evolutionary potential. CSIRO doi:10.1111/j.1752-4571.2008.00045.x

**Chivers, Ian.** When Emotion Beats Science in WME Magazine, page 4, September 2011

**Eddy, D** (2002). Managing Native Grassland: A Guide to Management for Conservation, Production and Landscape Protection, WWV Australia.

**Gibbs, J** (2005). Grass Identification Manual- For Everyone, Native Grass Resources Group Inc South Australia, University of South Australia Underdale. (Out of print)

**John Jessop, Gilbert R M Dashorst & Fiona James.** (2006), Grasses of South Australia an illustrated guide to the native and naturalized species Botanic Gardens of Adelaide and State Herbarium.

**Nicholas S G Williams, Adrian Marshall, John W Morgan (editors).** (2015), Land of Sweeping Plains: managing and restoring the native grasslands of south-eastern Australia CSIRO Publishing.

**Walters C, Whalley W, & Huxtable C.** (2000), Grassed up Guidelines for Revegetating with Australian Native Grasses, NSW Agriculture.

**Whalley, R.D.B.** (2000), The Sex Life of Grasses, presented at NGRG AGM 1999, in Journal: Native Grass South Australia Vol 1 No 5

**Whalley, R.D.B. Chivers, I.H and Waters, C.M.** (2003), The Assumptions behind the Recommended Use of Local Provenances of Australian Native Grasses for Revegetation, Third Stipa National Native Grasses Conference November 2003, Cooma NSW

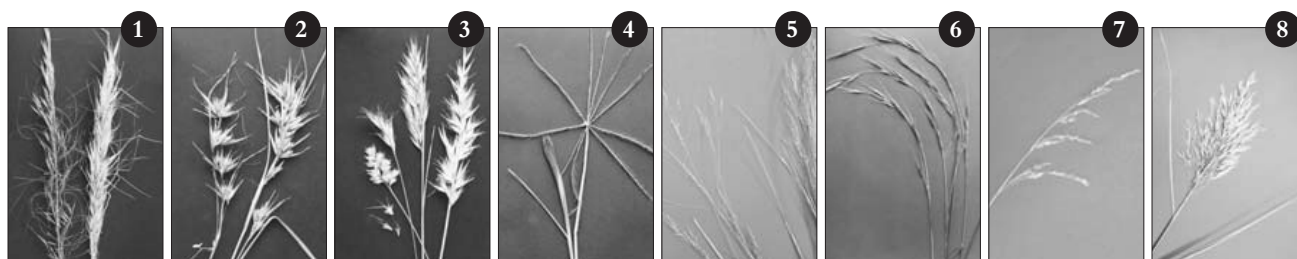
## Contacts

- Native Grass Resources Group: <https://nativegrassresourcesgroup.wordpress.com>  
Numerous identification sheets – free (download), postage only or charge & postage
- Seeding Natives Incorporated: <https://www.seedingnatives.org.au>

## Acknowledgements

- **Andrew Fairney** Chief Executive Officer Seeding Natives Incorporated (2020 updates)
- **Robert (Bob) Myers** OAM & Chairperson Seeding Natives Incorporated (2020 updates)

## An aid to identification of native grasses



Spear grass

Kangaroo grass

Wallaby grass

Windmill grass

Blown grass

Weeping rice-grass

Tussock grass

Common reed

① **Spear grass** (*Austrostipa* spp.) Usually tussocky, sparse-leaved perennials to 100cm.

② **Kangaroo grass** (*Themeda triandra*) Densely tufted perennial to 90+ cm.

③ **Wallaby grass** (*Rytidosperma* spp.) Tussocky perennials of varying heights (10–90cm).

④ **Windmill grass** (*Chloris truncata*) Tufted perennial to 45cm. Tiny black seeds.

⑤ **Blown grass** (*Lachnagrostis* spp) Mostly a summer annual, 20–70cm. Twiggy, cream flower heads.

⑥ **Weeping rice-grass** (*Microlaena stipoides* var. *stipoides*) Low, spreading grassy perennial to 60cm.

⑦ **Tussock grass** (*Poa labillardieri* var. *labillardieri*) Densely tufted perennial to 120cm.

⑧ **Common reed** (*Phragmites australis*) Vigorous, rhizomatic perennial to 3 metres.