



A collaboration between AWI, GRDC, MLA, RIRDC and Dairy Australia

Wallaby grass (*Austrodanthonia bipartita*, *A. richardsonii*)

Scientific name(s)

Austrodanthonia bipartita (Link) H.P. Linder (syn. *D. linkii* Kunth) cv. Bunderra
Austrodanthonia richardsonii (Link) H.P. Linder (syn. *Danthonia richardsonii* Cashmore cv. Taranna

Strengths

- Native perennial
- Produces high quality, nutritious green winter feed
- Persistent under heavy grazing
- Withstands drought and frost
- Tolerant of poor fertility and moderate acid soils

Limitations

- Seed costs are high
- Like most native grasses, seedling growth rates are generally low and establishing seedlings can be out-competed by annual or weedy species

Plant description

A tufted perennial which characteristic fine leaves and hairs on the ligule (at the base of the leaf blade).

Plant: Bunderra is generally taller (1 m) than Taranna (0.6 m)

Leaves: Leaf blades of Bunderra are longer and slightly wider than those of Taranna

Seedhead: Bunderra has much larger, more lanceolate seed heads than Taranna's which are more ovate

Seeds: Taranna seeds larger than those of Bunderra.

Pasture type and use

-

Where it grows

Rainfall

Temperate environments; lower (MAR) limits are 400mm (Southern NSW) and 500 mm (Northern NSW)

Soils

Bunderra is suited to heavier textured soils than Taranna which is adapted to medium textured soils but will also establish on sandy soils.

Temperature

Whilst optimum temperature range for germination is 15°C-25°C, germination declines when average temperature is below 20°C

Establishment

Companion species

Taranna and Bunderra are best sown without competition from legumes. Once established, Wallaby grass pastures can be over sown with legumes

Sowing/planting rates as single species

Surface sown at 0.3-2.0 kg/ha. Cover seed with soil to a depth of 5-10 mm

Sowing/planting rates in mixtures

Not recommended

Sowing time

Optimum germination temperatures range from 15°C-25°C. Late autumn/early winter

Inoculation

Not applicable

Fertiliser

Phosphorus may have a negative impact on seedling establishment

Management

Maintenance fertiliser

Moderate quantities of nitrogen (50kg/ha) applied in spring will increase tiller number

Grazing/cutting

Tolerates grazing. Intolerant of high intensity grazing for long periods. Best either rotationally grazed, or grazed at low stocking rates that maintain mean herbage mass above 1500-2000 kg DM/ha and 70% ground cover (for high rainfall zones of southern Australia). This ensures that it is only partially defoliated and allows recovery after grazing to maintain growth, vigour and ground cover.

Seed production

Nitrogen application (25-50kg/ha) at late vegetative and post-flowering may not increase seed yield. Effects of earlier applications of nitrogen are unknown

Seed harvesting methods include windrowing and brush harvesting; however, for Bunderra turning of windrows can result in reduced seed yields associated with losses of florets from seedheads

Seed yields vary from 18-98 kg/ha for Taranna and 8-121 kg/ha for Bunderra (based on a density of 1 plant/m²)

Ability to spread

High rates of recruitment

Weed potential

Unknown

Major pests

None known

Major diseases

None known

Herbicide susceptibility

Glyphosate at rates >360 g a.i./ha; seedlings metsulfuron-methyl at rates >12 g a.i./ha

Animal production

Feeding value

Moderate to high during growing season; crude protein ranges from 10-17% and digestibility from 45-74%

Palatability

Readily consumed by livestock



Production potential

5-7.8 t/ha of biomass per year

Livestock disorders/toxicity

None known

Cultivars

Cultivar	Seed source/Information
Bunderra (<i>A. bipartita</i>) 	Native Seeds Pty Ltd
Taranna (<i>A. richardsonii</i>) 	NSW DPI

 Denotes that this variety is protected by Plant Breeder's Rights Australia

Further information

Cole IA and Johnston WH (2006). Seed production of Australian native grass cultivars: an overview of current information and future research needs. *Australian Journal of Experimental Agriculture* 46, 361-373.

Lodge GM (2002). Studies of seed production in two *Austrodanthonia* grass cultivars. *Australian Journal of Agricultural Research* 53, 119-1202.

Lodge GM (1993a)A. Grasses 26. *Danthonia* (a) *Danthonia richardsonii* Cashmore (wallaby grass) cv. Taranna. *Australian Journal of Experimental Agriculture* 33,393-4.

Lodge GM (1993b)A. Grasses 26. *Danthonia* (b) *Danthonia linkii* Kunth (wallaby grass) cv. Bunderra. *Australian Journal of Experimental Agriculture* 33,395-6.

Mitchell M (1996). *Native Grasses - Identification Handbook for Temperate Australia*. Agmedia (East Melbourne)

Waters C, Whalley, W and Huxtable, C (2000). *Grassed-up; guidelines for re-vegetation with Australian native grasses*. NSW Agriculture (Orange)

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Author and date

Cathy Waters

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