

# EverGraze

More livestock from perennials

More perennials

Better livestock

Healthier catchments



FUTURE FARM  
INDUSTRIES CRC



australian wool  
**innovation**  
• limited

## Native pastures for sustainable agriculture

A wide range of native perennial grasses occur in our pastures. If recognised and properly managed these grasses can be very productive. Native grasses have persisted well on most farms due to their persistence in acid and low fertility soils, a greater tolerance to a wide range of soil texture types, and drought and frost tolerance.

Encouraging native perennial grasses in existing pastures will have the benefits of:

- Improved ground cover and soil stability
- Weed competition with high persistence
- Low input grazing systems
- Increased water use to reduce groundwater recharge
- Improved soil structure and organic matter
- Reduced soil acidification rate
- Species diversity.



**Left:** Low productivity annual pasture with onion grass and flat weed

**Right:** Microlaena and clover pasture providing good quality feed over winter



### **Spear Grass**

*Austrostipa scabra*

There are approximately 60 species of *Austrostipa*, of which five are introduced. *Austrostipa* are potentially desirable species because of the amount of green leaf material that they produce. However its sharp awns are a major contaminant of fleeces and carcasses. A coarse-tufted perennial grass that remains green all year.

**Production:** 2.0 t/ha

**Forage value:** low to moderate

**Crude protein:** 3 to 17%

**Digestibility (green leaf):** < 60%

**Response to fertility:** decreased growth

**Response to grazing:** decreased growth

**Frost tolerance:** high

**Drought tolerance:** high



### **Weeping Grass,**

### **Meadow Rice Grass**

*Microlaena stipoides*

A tufted perennial grass with a short rhizome; it remains green throughout the year producing high-quality feed. Weeping grass is a highly-competitive species that responds well to increased fertility and moderate-to-heavy grazing while it is actively growing.

**Production:** 1.7 to 7.4 t/ha, up to 25 t/ha under ideal conditions

**Forage value:** high

**Crude protein:** 10 to 27%

**Digestibility:** 55 to 80%

**Response to fertility:** increased growth

**Response to grazing:** increased growth

**Frost tolerance:** moderate to high

**Drought tolerance:** high





### **Red Grass, Red-leg Grass**

*Bothriochloa macra*

Red grass (or red-leg grass) is a warm-season perennial grass that forms a prostrate tuft of basal leaves with numerous wiry stems. Leaves are usually reddish or purplish in colour. Stems are of low acceptability and digestibility, but the high-quality leaves are readily eaten when green.

**Production:** 3.8 to 10.4 t/ha

**Forage value:** moderate to low

**Crude protein:** 4 to 15%

**Digestibility:** 48 to 59%

**Response to fertility:** increased growth

**Response to grazing:** increased growth

**Frost tolerance:** low to moderate

**Drought tolerance:** high



### **Windmill Grass**

*Chloris truncata*

Windmill grass is a short-lived (2 to 3 years) perennial grass and makes rapid growth in early spring. The plants are prostrate with small fibrous leaves and do not appear to be readily grazed. Windmill grass is often stoloniferous.

**Production:** 0.32 to 3.1 t/ha

**Forage value:** moderate

**Crude protein:** 7 to 12%

**Digestibility:** 35 to 68%

**Response to fertility:** increased growth

**Response to grazing:** increased growth

**Frost tolerance:** low to moderate

**Drought tolerance:** moderate





### **Tussock Grass, Poa Grass**

*Poa labillardierei*

A dense, tussocky perennial grass with slender leaves. The seedheads are open and pyramid shape. This grass typically occurs on the lower slopes and valley floors of areas that are wet in the winter months. Tussock grass generally occurs in areas of medium-to-high fertility.

**Production:** unknown

**Forage value:** low

**Crude protein:** 4 to 12%

**Digestibility:** 42 to 65%

**Response to fertility:** increased growth

**Response to grazing:** unknown

**Frost tolerance:** high

**Drought tolerance:** high



### **Kangaroo Grass**

*Themeda triandra*

Kangaroo grass is one of Australia's most widespread species, extending from the arid interior to alpine regions. A drought-resistant, deep-rooted, warm-season perennial grass with a tussocky habit. The grass is very common in areas that are not heavily grazed, eg. cemeteries and roadsides.

**Production:** 1.6 to 8.3 t/ha

**Forage value:** moderate to high

**Crude protein:** 5% (winter) to 17% (summer)

**Digestibility:** 54 to 75%

**Response to fertility:** decreased growth

**Response to grazing:** decreased growth

**Frost tolerance:** low to moderate

**Drought tolerance:** high





**Common Wheat Grass,  
Rough Wheat Grass**

*Elymus scaber*

A tussocky cool-season perennial. One of the first native grasses to start growing in spring, providing early green feed. There is considerable variation within this species. This species is usually a minor component of pastures, and therefore only makes a small contribution to total pasture production.

**Production:** 3.4 to 7 t/ha

**Forage value:** moderate to high

**Crude protein:** 10 to 36%

**Digestibility:** 53 to 90%

**Response to fertility:** increased growth

**Response to grazing:** increased growth

**Frost tolerance:** high

**Drought tolerance:** moderate



**Wallaby Grass, White top**

*Austrodanthonia*

Wallaby grasses are amongst the most valuable native grasses in pastoral areas of Australia, due to persistence and productivity. A tufted perennial grass that has fine leaves and remains green all year. It has long hairs on the ligule at the base of the leaf blade. The leaf blade is folded in the bud and there are parallel lines of thickening on the leaf blade. Individual species of wallaby grass are identified primarily by the arrangement, shape and length of the hairs on the back of the lemma and by the shape and size of the palea.



**Production:** 1.8 to 7.8 t/ha

**Forage value:** moderate to high

**Crude protein:** 10 to 25%

**Digestibility:** 45 to 82%

**Response to fertility:** increased growth

**Response to grazing:** increased growth, even at fairly high stocking rates

**Frost tolerance:** high

**Drought tolerance:** high

Note: The data presented here is the average for the genus. The figures given are an indication of the potential of the wallaby grass. There is likely to be variation with species but this to date has not been fully explored.

### Useful native grass web sites:

Barlow, T. (1998). Grassy Guidelines: How to manage native grasslands and grassy woodlands on your property. Free from the Grassy ecosystems website

<http://www.deh.gov.au/land/publications/grassguide/>

Barlow, T. and Thorburn, R. eds. (2000) Balancing conservation and production in Grassy Landscapes. Proceedings of the Bushcare Grassy Landscapes Conference, Clare SA August 1999. Free from the Bushcare website

<http://www.deh.gov.au/land/publications/grasscon/>

Friends of Grasslands: Canberra based group supporting native grass ecosystem conservation in Australia. They have 6 editions of a newsletter yearly, field trips, on-ground conservation efforts, education, assistance and lobbying.

Phone: 02 6241 4065 Website: <http://www.fog.org.au/>

Native Grass Resources Group: Aims to promote and facilitate identification, conservation and protection of native grasses, to research and develop propagation and management techniques and to act as a focal point for the community and agencies in the Mt Lofty Block, South Australia.

Phone 08 8391 7500 Website: <http://www.nativegrassgroup.asn.au/>

Stipa Native Grass Association: Aims to promote research and enhance community education in native grass management and their role as a component of pasture.

Website: [www.stipa.com.au](http://www.stipa.com.au)

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