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vegetation
and biodiversity

improving farm profits
through biodiversity

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GRAZING NATIVE PASTURES IN TASMANIA

The forage characteristics and qualities of native grasses

Getting the most out of your pastures is possible if you graze them at the right time. Forage quality is highest when pasture plants are young and actively growing. Different native grass species grow and flower at different times of the year. Some native grasses grow during the warmer months (e.g. kangaroo grass) while others grow during the cooler months (e.g. wallaby grass). Having a mix of species in a pasture will provide the best quality and quantity of feed year round. The native herbs found in diverse, healthy native pastures are also likely to be an important source of nutrition for stock.







Many wool producers report that one of the main advantages of native pastures is that protein levels remain relatively constant throughout the year. This increases the chance of the sheep producing a strong fibre, with no break in the staple.

Research by Doug Friend of the Tasmanian Institute for Agricultural Research (TIAR) and studies from elsewhere have shown that not only are native pasture grasses palatable and productive, but at certain times of the year they produce similar levels of protein and energy to improved pasture grasses, even without any fertiliser inputs. Maintaining healthy diverse native pastures through good grazing management will maximise returns from these low input systems.



Land, Water & Wool (LWW) is a joint investment between the wool industry's peak research and development body, Australian Wool Innovation Limited, and the nation's premier investor in natural resource management research, Land & Water Australia.

Native Vegetation and Biodiversity is one of eight *Land, Water & Wool* sub-programs. The others include:

-  Benchmarking and Evaluation
-  Sustainable Grazing on Saline Land (SGSL)
-  River management and water quality
-  Managing climate variability
-  Managing pastoral country
-  Future woolscapes
-  Sustainable Grazing Systems Harvest Year

Native Vegetation and Biodiversity

The *Native Vegetation and Biodiversity* Sub-program of Land, Water & Wool is exploring ways of managing landscapes so as to maintain enterprise profitability while meeting natural resource management objectives. It is achieving this by working closely with woolgrowers, drawing on the research already undertaken through the Native Vegetation R&D Program managed by Land & Water Australia and undertaking new research on the links between wool production and biodiversity.

The Tasmanian regional project, *Biodiversity conservation integrated into sustainable grazing systems*, is looking at how woolgrowers currently manage their native vegetation for conservation and production purposes on-farm.

This fact sheet aims to describe the forage characteristics and qualities of native grasses and how best to graze them to get the most from them.

Forage qualities of some common native grass species

Species	Forage value	Digestibility (%)	Crude protein (%)	Grazing & fertiliser response
Wallaby grass (<i>Austrodanthonia</i> spp.)	moderate – high	45 - 82	10 - 25	Tolerates heavy grazing & becomes dominant in these situations. Increases growth with increasing soil fertility (but is less competitive in highly fertile soils).
Kangaroo grass (<i>Themeda triandra</i>)	moderate – high	54 - 75	5 (winter) – 17 (summer)	Disappears with moderate - heavy stocking rates. Disappears with increasing soil fertility. Responds well to low stocking rates or regular spelling during the growing season.
Weeping grass or microlaena (<i>Erharta stipoides</i>)	high (produces high quality feed)	55 - 80	10 - 27	Tolerates moderate to heavy grazing. Increases growth with increasing soil fertility. Responds well to periodic spelling.
Common wheat grass (<i>Elymus scaber</i>)	moderate – high	53 - 90	10 - 36	Disappears under heavy grazing. Increases growth with increasing soil fertility. Responds well to periodic spelling.
Native spear grass (<i>Austrostipa</i> spp.)	moderate – low	<60	3 - 17	Disappears under heavy grazing. Disappears with increasing soil fertility. Responds well to periodic spelling.
Silver tussock grass (<i>Poa labillardierei</i>)	low (young growth is readily grazed)	42 - 65	4 - 12	Tolerates heavy grazing except under drought conditions. Increases growth with increasing soil fertility. Best forage value from young growth

Data source: Mitchell (2002) & Friend (unpublished data)

Growth characteristics of some common native grass species

Species	Flowering time	Time of most active vegetative growth	Drought tolerance	Frost tolerance	Growth characteristics
Wallaby grass (<i>Austrodanthonia</i> spp.)	spring - autumn	winter to spring	high	high	Persistent and productive under a range of grazing management regimes. Capable of year-round growth, but most growth occurs during winter and spring.
Kangaroo grass (<i>Themeda triandra</i>)	summer - autumn	spring to summer	high	low	Actively growing from late winter until early autumn where soil moisture is adequate.
Weeping grass or microlaena (<i>Erharta stipoides</i>)	summer - autumn	winter to spring	high	moderate	Capable of year-round growth. Shade tolerant (common in lightly timbered country). Common on the edge of sheep camps where soil fertility is high.
Common wheat grass (<i>Elymus scaber</i>)	late winter - summer	winter to spring	moderate	high	Very palatable, can be preferentially grazed and lost from pasture but usually a minor contribution to total pasture production.
Native spear grass (<i>Austrostipa</i> spp.)	summer - autumn	winter to spring	high	high	Seeds freely and colonises bare ground. Seeds can cause wool contamination & eye damage.
Silver tussock grass (<i>Poa labillardierei</i>)	spring - summer	winter to spring	high	high	Tall tussocks provide shelter for lambs and roughage for cattle.

Data source: Mitchell (2002) & Friend (unpublished data)

Key Points

- Native country is good fine wool country – it is a stable, low maintenance landscape and needs little effort to maintain.
- A mix of species in a pasture will give good flexibility in grazing management – production may be lower but wool staple strength will be good.
- Native grasses are well-adapted to the Tasmanian climate – many producers report that they don't have to drench or fertilise on native country.

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Further reading:

- Managing grazing on native pastures in Tasmania* (fact sheet)
- Grazing native pastures in Tasmania – managing kangaroo grass pastures* (fact sheet)
- Grazing native pastures in Tasmania – the best way to manage grassy weeds in native pastures* (fact sheet)
- Grazing native pastures in Tasmania – managing wallaby grass pastures* (fact sheet)
- Common grasses of Tasmania: an Agriculturists Guide*, by P. Lane et al 1999
- Native grasses: An identification handbook for temperate Australia*, by M. Mitchell, Landlink Press 2002

Acknowledgements:

Information from *Managing Tasmanian Native Pastures – a graziers guide* by K. Mokany, D. Friend, J. Kirkpatrick, L. Gilfedder, F. O'Connor (currently in production) and *Native grasses: An identification handbook for temperate Australia* by M. Mitchell, Landlink Press 2002 were used for this fact sheet. Comments were provided by Doug Friend (doug.friend@dipwe.tas.gov.au). Photographs were taken by Kerry Bridle, Louise Gilfedder and Matt Appleby.

Stay informed

If you are interested in receiving regular research and other updates from the Native Vegetation and Biodiversity Tasmanian project, please complete the section below and fax this entire page to:

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