More perennials



Better livestock

Healthier catchments

Estimating feed availability

Native perennial pastures









Introduction

Native pasture

A 'native pasture' can be any pasture where native grasses are the dominant perennial species. Most native pastures are a mixture with annual grasses and legumes as well as broadleaf weeds.

Over 1000 grasses can be considered native to Australia.

This booklet contains photographs and helpful data for three of the most commonly found native grass genus in grazing pastures across South East Australia. It should be used with the feed budgeting tools available at www.evergraze.com.au/information/evergraze tools.

Managing grazing pressure correctly is critical for improved productivity and native grass persistance.

Native pasture management

Productivity of native pastures can be highly variable depending on the species present, their growth stage and the season. However, if recognised and managed properly they can provide a consistent feed supply as well as improved ground cover and soil stability.

For improved production and persistence of the native grass component of your pasture, EverGraze recommends that you:

- maintain a minimum 800 kg/ha of Dry Matter,
- try to keep at least 70% groundcover,
- increase grazing pressure in early-mid spring to reduce competition from annual grasses and legumes,
- remove stock in late spring to early summer to allow native grasses to seed,
- graze native pastures in mid-late summer,
- use rotational or cell grazing, and
- learn to identify native grasses and invasive annual species and adjust management according to the species present.

Certain native grasses, like *Austrostipa* (speargrass) and *Aristida* (wiregrass) species, are less preferred by stock and will only be grazed when pasture quantity is low.

To help you identify which native grass species you have in your pasture and for information on managing native pastures, go to www.evergraze.com.au

Click on 'Information/EverGraze Fact Sheets' where you will find information including 'Identifying native perennial grasses' and 'Management of Native Pastures in Victoria'.

Pasture quantity

Pasture quantity is the amount of pasture available for livestock to eat and is expressed as kilograms of Dry Matter (DM) per hectare. Pasture availability should be in a range of 1000-2000 kg/ha for maximum productivity and ground cover.

Most native grasses are perennial plants and require different grazing practices to annual grasses. They can die out if repeatedly grazed to ground level. That is why we have calculated pasture quantities based on cutting or grazing height of 10 mm above ground level. This differs from other measurement methods such as Feed On Offer (FOO) that includes all plant material that is above ground.

The Dry Matter values accompanying the photographs in this booklet are in kg/hectare of dry matter after oven drying for 24 hours at 70°C.

Dry Matter estimates can be used to budget the quantity of pasture available and when used with pasture quality information is valuable in predicting livestock performance.

It is important to understand that it is only a measure of what is there and does not consider whether stock will eat it or not. Native grass plants or clumps often contain large amounts of dead material that is usually left in favour of the green.

Feed quality

Native pasture palatability and nutrient value will vary depending on season. Generally there is less green leaf material available as the pasture moves from its vegetative growth to reproductive stage, with a corresponding decline in feed value to livestock.

Feed test analysis of your pasture is the best way to get quality information. Otherwise use the % green data accompanying the pictures as well as the tables on page 4 to assist with stocking rate decisions.

How to use this book

Native pastures can vary considerably with changes in topography and soil type. Mentally break your paddock up into areas of similar pasture type and size and design a transect path that passes through each.

Walk or drive the transect path stopping randomly to take estimates using the images from this booklet as a guide, taking roughly equal numbers of estimates from each area.

Record your estimates. The larger and more variable the paddock, the more estimates you should take (20-50). The more you take, the more accurate the paddock average will be. To calculate the average add all the estimates and divide by the number of estimates taken.

Method for improved accuracy

- Select an example of the lowest, highest and a middle level of pasture in the paddock. Mark the sites so you can refer to them later if required.
- Using a quadrat 32cm x 32cm, cut the pasture within the quadrat to 10mm above ground level at each site.
- Sort the sample to remove non-plant material, (dirt, manure, leaves, sticks).
- Dry the samples in a conventional oven at 70-80 °C for 24 hours or until the green material is crisp.

OR using a microwave, place samples with a small container of water. Dry for 10 minutes at maximum power. If not crisp, dry for another five minutes. Repeat as necessary.

- Weigh the dry sample, preferably to the nearest gram.
- Multiply the dry sample weight by 100 to give kg/ha.
 You now know the range of pasture levels within the paddock.

	Dry (Dead)	Dry perennial	Dry Gone to Green perennial seed grassy		Green, high clover	
Digestibility	40%	50%	60%	68%	75%	
Energy MJ ME/kg DM	4	6	8	10	12	
Protein %	6%	6-10%	10-12%	15-20%	25-30%	
Fibre (NDF)	60-70%	50-60%	40-50%	30-40%	30%	

Table 1. Estimated digestibility, energy, protein and fibre value of pastures (exotic)

(Figures taken from Broadford Grazing Experiment results)

Table 2. Measured Metabolisable Energy (ME) and estimated green percentage of a native grass dominant pasture at Chiltern (NE Victoria) in 2009-10

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Energy MJ ME/kgDM	5.8	5.5	6.6	6.6	6.9	7.3	9.0	9.5	9.2	7.6	7.1	5.8
Green %	7	7	36	31	65	61	91	64	99	94	26	29

Summer pastures

Weeping grass (Microlaena stipoides) dominant



2900 kg DM/ha, 25% green

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Summer pastures Wallaby grass (Austrodanthonia auriculata)



Summer pastures Spear grass (Austrostipa scabra) dominant



2000 kg DM/ha, 45% green

Feed availability

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Spring pastures Weeping grass (Microlaena stipoides) dominant



Spring pastures Wallaby grass (Austrodanthonia auriculata)



900 kg DM/ha, 80% green

2200 kg DM/ha, 55% green

Spring pastures Spear grass (Austrostipa scabra)



1800 kg DM/ha, 50% green

2800 kg DM/ha, 55% green

Autumn pastures Weeping grass (*Microlaena stipoides*)



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Feed availability

2200 kg DM/ha, 45% green

Autumn pastures Wallaby grass (Austrodanthonia auriculata)



2900 kg DM/ha, 40% green

Autumn pastures Spear grass (Austrostipa scabra)



1100 kg DM/ha, 20%green

Feed availability

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Acknowledgements

Photographer: Ken Wilson, DPI Rutherglen
 Compiled by: Ken Wilson, DPI Rutherglen
 Design: Gill Fry, Network SW Consulting
 Advice: Mandy Curnow, DAFWA
 Meredith Mitchell, DPI, Rutherglen
 Jeff Hirth, Editorial and Agronomic Services, Springhurst

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EverGraze is a Future Farm Industries CRC, MLA and AWI research and delivery partnership

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