

AN INITIATIVE OF  
*Making More From Sheep*



## Turning Pasture into Product

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member of the SA Livestock Consultants group

EVENT  
PARTNERS:



EVENT  
SUPPORTERS:

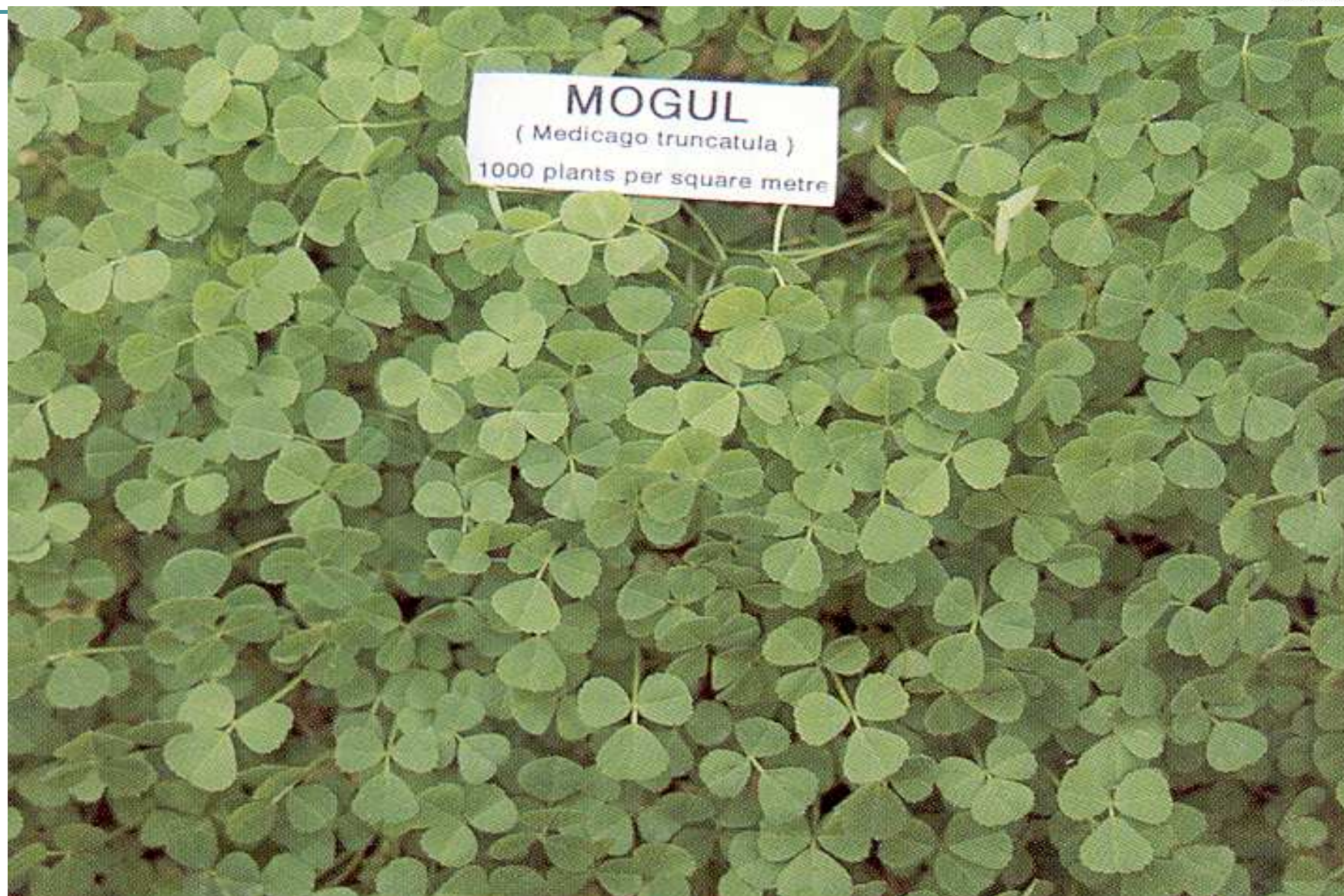




# Lucerne



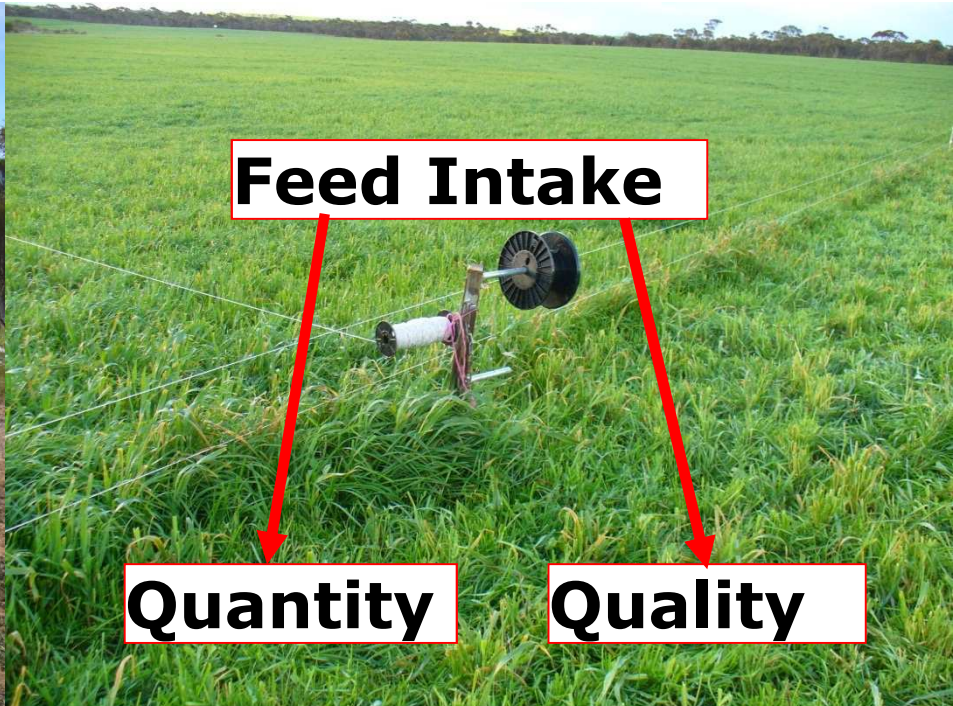








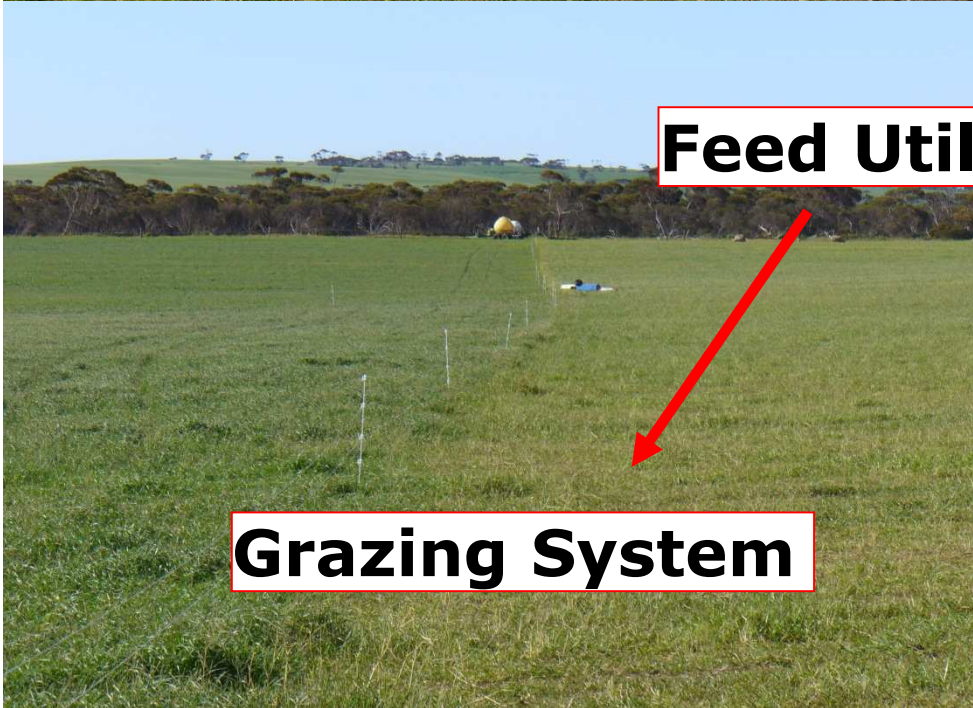
**Water**



**Feed Intake**

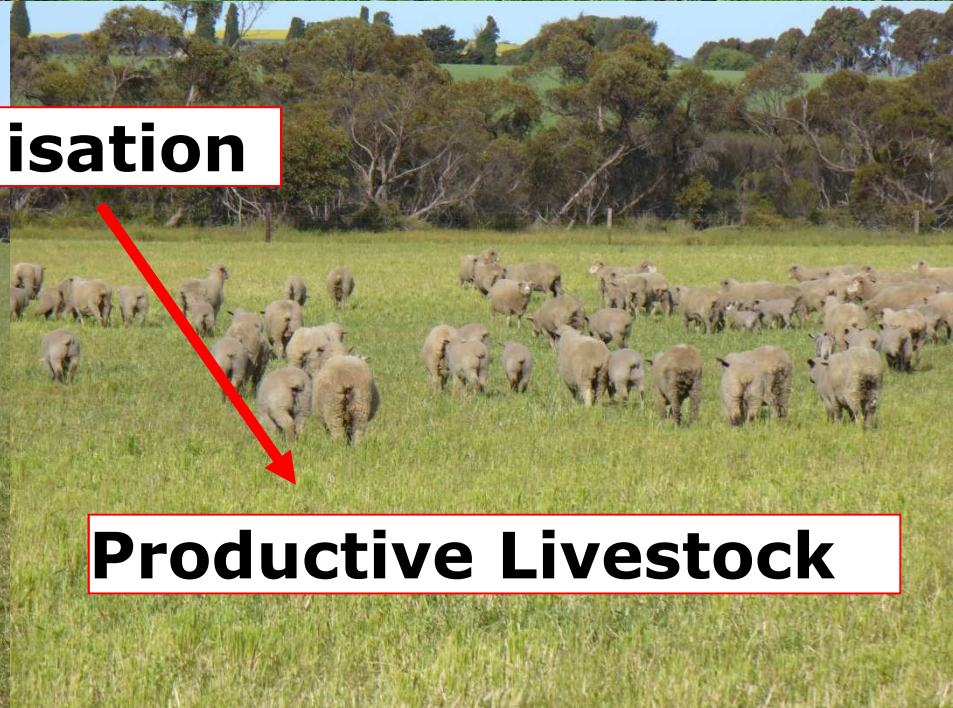
**Quantity**

**Quality**



**Feed Utilisation**

**Grazing System**



**Productive Livestock**



## Quantity of Feed – Grow More



- Plant density
- Fertility/nutrition
- Leaf area & ground cover = grazing
- Mineral balance for plants and animal
- Pest & disease control



# Density drives productivity

## Medic 150 plants/m<sup>2</sup>

6 weeks after germination





## Density drives productivity

### Medic 1000 plants/m<sup>2</sup>

6 weeks after germination



## Soil fertility greatly affects pasture productivity and palatability

**Read Five easy steps** to ensure you make money from superphosphate

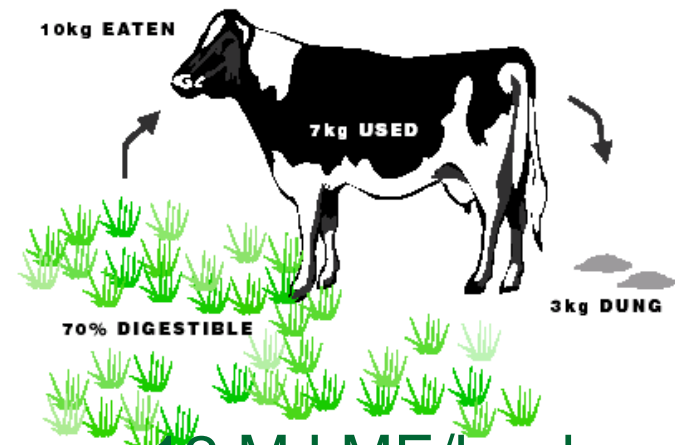
- Soil test
- Work out stocking rate on grazed pastures
- Match P application to stocking rate
- Check that proposed investment in P fertiliser and/or livestock will generate an acceptable return
- Check other factors that might influence P response - S, N, K, pasture density



# Get the quality right

## Know how good your pastures are

DM % = dry matter (after water removed)  
Quality = % digestibility of the dry matter  
ME – metabolisable energy (ME) measured in mega joules (MJ) per kg DM



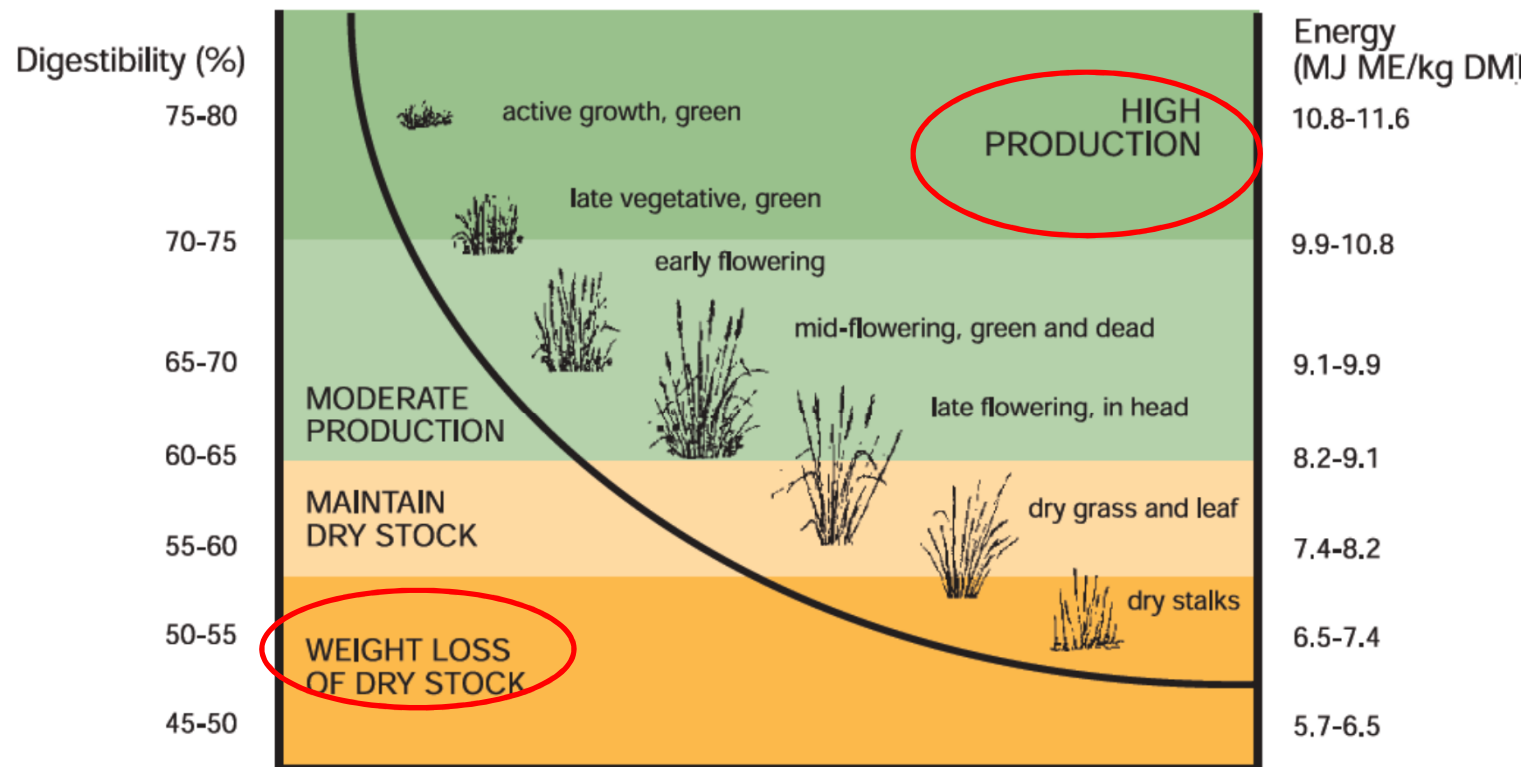
**High digestibility 80% = more energy 12 MJ ME/kg dm**

**Moderate digestibility 70% = moderate energy 10 MJ ME/kg dm**

**Low digestibility 50% = low energy 7 MJ ME/kg dm**



# Feed quality drops as plants grow



SOURCE: NSW PROGRAZE<sup>®</sup> Manual, NSW Agriculture



# Phase II is the place to be!



Quantity: Low  
Quality: High

Quantity: High  
Quality: Low

**PHASE I**

**PHASE II**

**PHASE III**

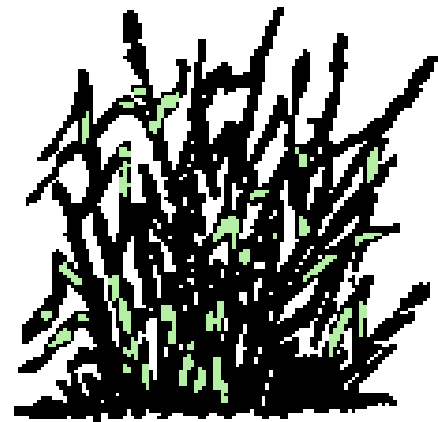
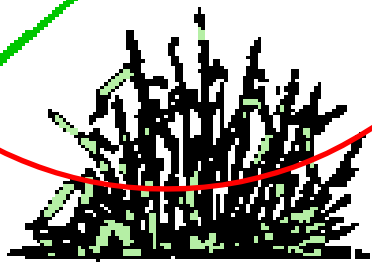
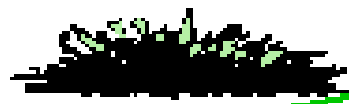
Slow growth after grazing

Rapid growth due to high leaf area

Slow growth due to shading of growth points

(800-1100kg/ha DM or 2-3cm)

(1800-2500kg/ha DM or 5-7.5cm)



TIME (weeks) →



# Measure, Monitor, Manage

800 kg DM

800 kg DM

**MLA Pasture Ruler**  
Pasture Height to Pasture Quantity Indicator

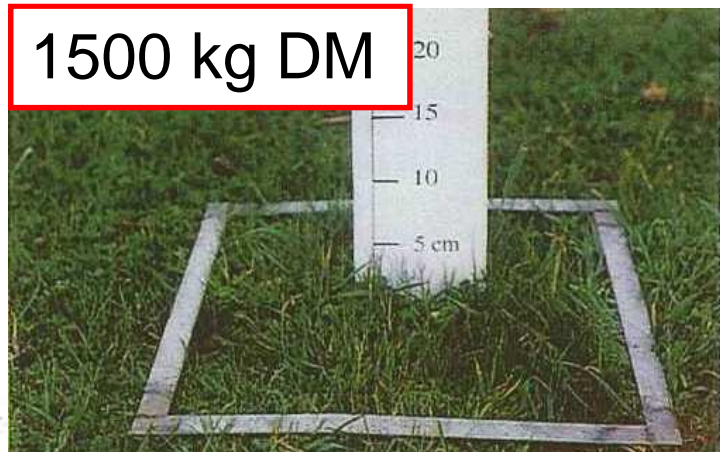
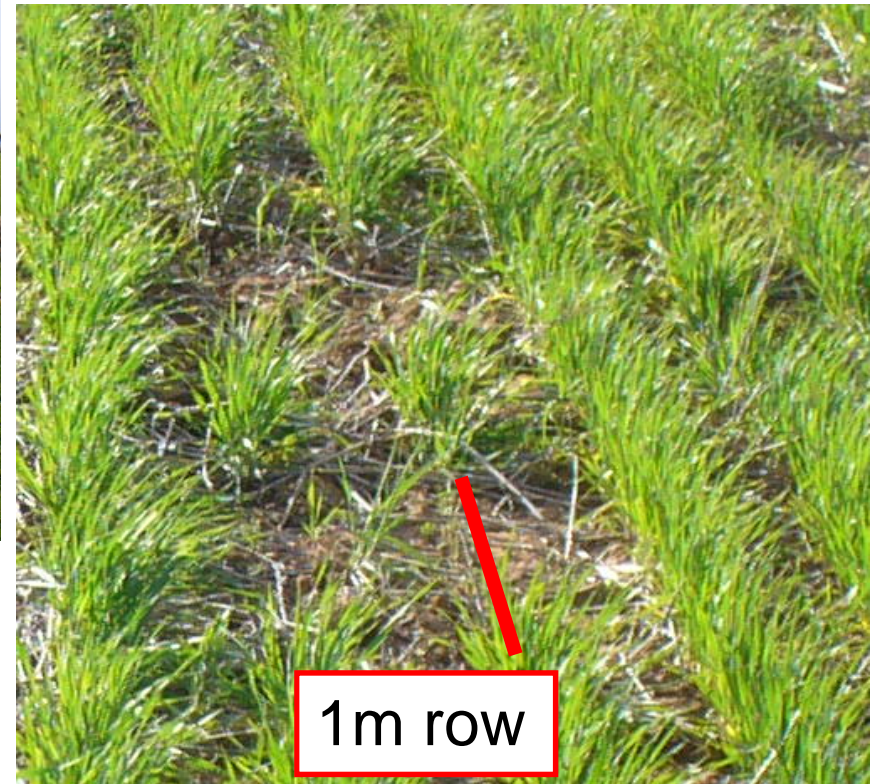
See what sets of rules and "Top & Tail" parameters for estimation should use to use this ruler to predict animal performance and income.

Pasture quantity for a consistently diverse pasture: indicative estimate of kg DM/ha dry matter/ha.

Height (cm)	DM/ha	Forage quantity - growth
14	3000	Forage quantity - growth: slow, no yield additions to stocks, healthy decline
12	2500	
10	2200	
8	1900	Preferred range of DM/ha for animal and pasture production
7	1700	
6	1600	
5	1400	
4	1200	
3	1000	Forage quantity - growth: regrowth, minimal intake and regrowth slower toward
2	700	
1	400	

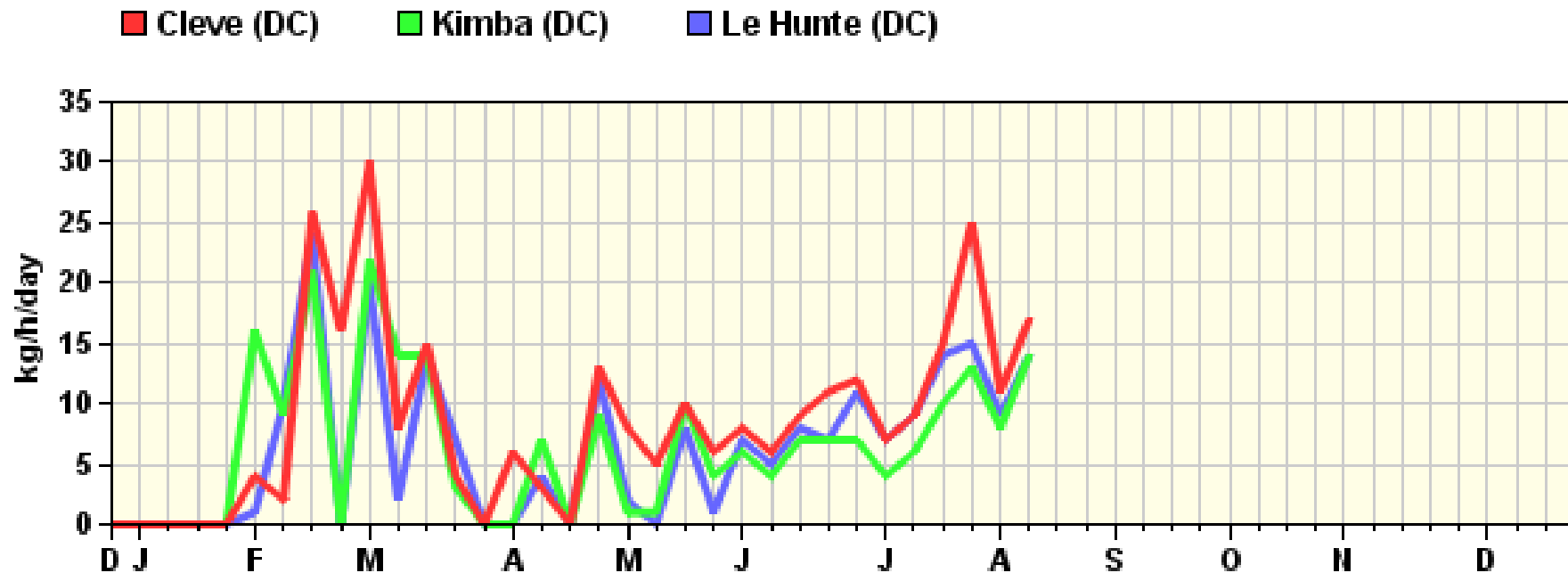
Figures are indicative only. Very sparse, widely spaced pastures will have a higher DM for a given height than pastures with a high proportion of bare ground. Pastures with a high proportion of bare ground will have a lower DM for a given height than pastures with a low proportion of bare ground.

Developed by MLA Pasture Best Program



# Know your feed supply

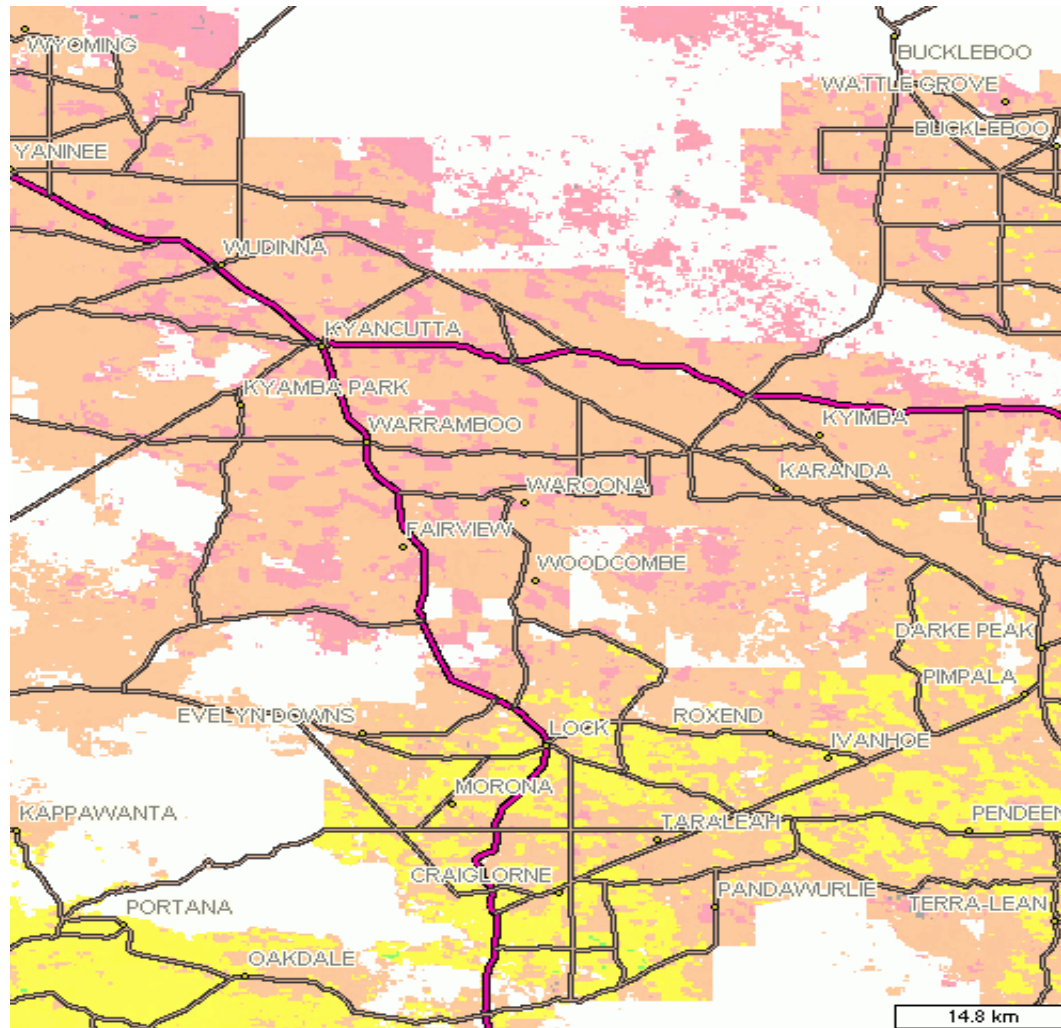
## Shire PGR Comparisons - 2011



[www.pasturesfromspace.csiro.au](http://www.pasturesfromspace.csiro.au)



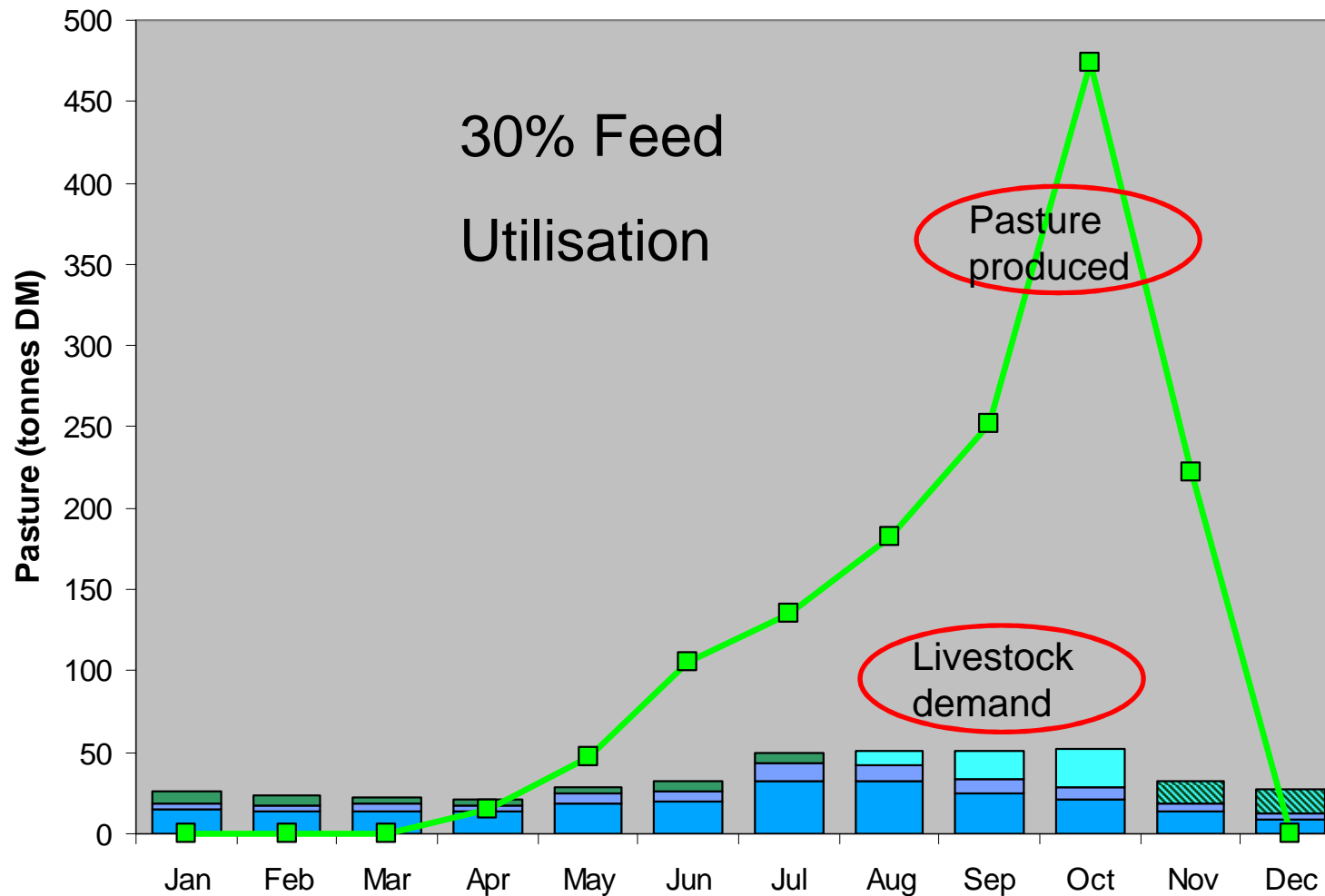
### Kg/ha daily pasture growth upper EP week ending August 16<sup>th</sup> 2011



[www.pasturesfromspace.csiro.au](http://www.pasturesfromspace.csiro.au)

# Know your feed demand

download the MLA Feed Demand Calculator





## Pasture benchmarks for sheep short dense pasture (4cm cereal in brackets)

kg/ha dry matter

<b>Digestibility</b>	<b>75%</b>	<b>68%</b>	<b>60%</b>
<b>Dry ewe</b>	400 (300)	600	1200
<b>Pregnant ewe</b>			
mid	500 (400)	700	1700
<b>Lactating ewe</b>			
singles	1000 (600)	1700	Not suitable
twins	1500 (1200)	Not suitable	Not suitable
<b>Weaner lamb</b>			
30% potential	400	700	1700
50% potential	600	1000	Not suitable
90% potential	1600	Not suitable	Not suitable
100% potential	1800 (1500)	Not suitable	Not suitable

Pastures are not about how much feed you produce, but how well you use it





# Methods of Increasing Feed Utilisation

Priority	Cost	Example
<p><b>1</b> Change that improves conversion of current pastures into wool or meat</p>	<p>Lower cost \$10-\$20/ha</p>	<p>Time of lambing Weaner management Genetics Sheep sale times Flock structure</p>
<p><b>2</b> Increase the productivity of existing pastures</p>	<p>Moderate cost \$30-\$50/ha</p>	<p>Increase stocking rate Rotational grazing Fencing &amp; water Increase fertiliser</p>
<p><b>3</b> Improve pasture productivity by introducing more productive species</p>	<p>Higher Cost \$80 - \$200/ha</p>	<p>Sowing new pasture varieties or renovating existing pastures</p>

## 2008 Case Study

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### Chris Lymn Wudinna

**1. Set stocked 100 ha triticales paddock with 220 ewes and 240 lambs (lambing June 20<sup>th</sup> )**

**Lasted 80 days used 680 kg/ha dry matter**

**2. Rotationally grazed another 100 ha triticales paddock with 220 ewes and 240 lambs (lambing June 20<sup>th</sup> )**

**Lasted 110 days used 1000 kg/ha dry matter, plus 20 ha wasn't grazed (reapt and stubble baled).**

**Return – extra grazing \$500 plus grain \$3200 plus straw \$800 = \$4500 (\$45/ha)**









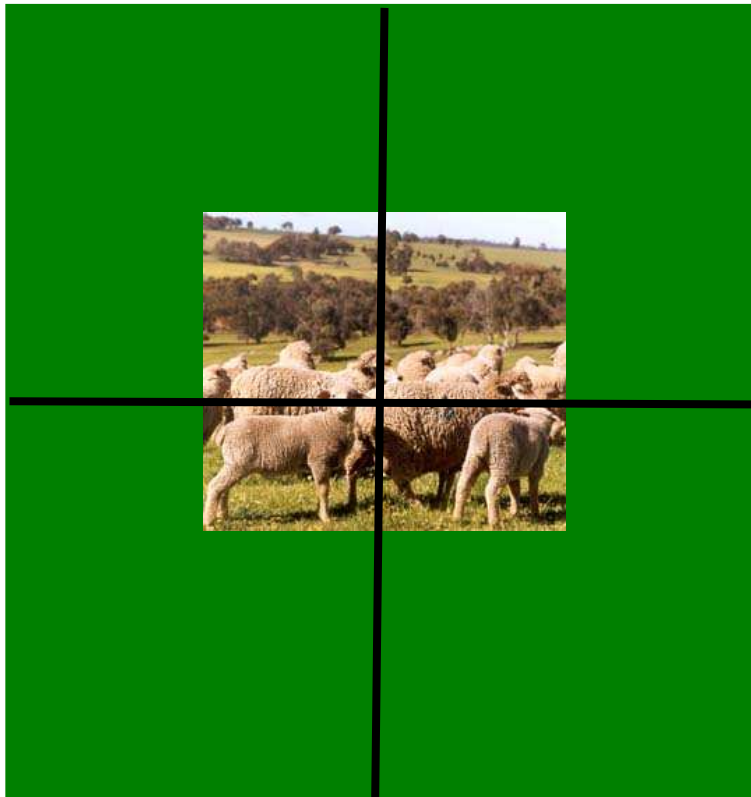


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# Stocking Rate verses Stocking Pressure

**60 ha paddock – 600 DSE**



**60 ha**

Stocking Rate = 10 DSE/ ha

Stocking Pressure = 10 DSE/ ha

**30 ha**

Stocking Rate = 10 DSE / ha

Stocking Pressure = 20 DSE/ ha

**15 ha**

Stocking Rate = 10 DSE / ha

Stocking Pressure = 40 DSE/ ha



## Simple grazing system



- Paddock split into four cells
- Using temporary electric fencing
- Rotated every 5-15 days
- Even grazing
- Stocking Pressure 50-100 DSE/ ha
- **Kept between 800kg and 2000kg DM/ha**
- Surplus reapt or conserved

# So what can you do now about managing pastures and sheep?

- Develop pasture & animal assessment skills
  - **PROGRAZE®**
- Use feed demand calculator
- Develop confidence in Feed budgeting
  - **PROGRAZE**
  - **MLA Rainfall to Pasture growth outlook tool**
  - **Pastures from Space for pasture growth rates**
- Making more from sheep manual
- Life Time Ewe course





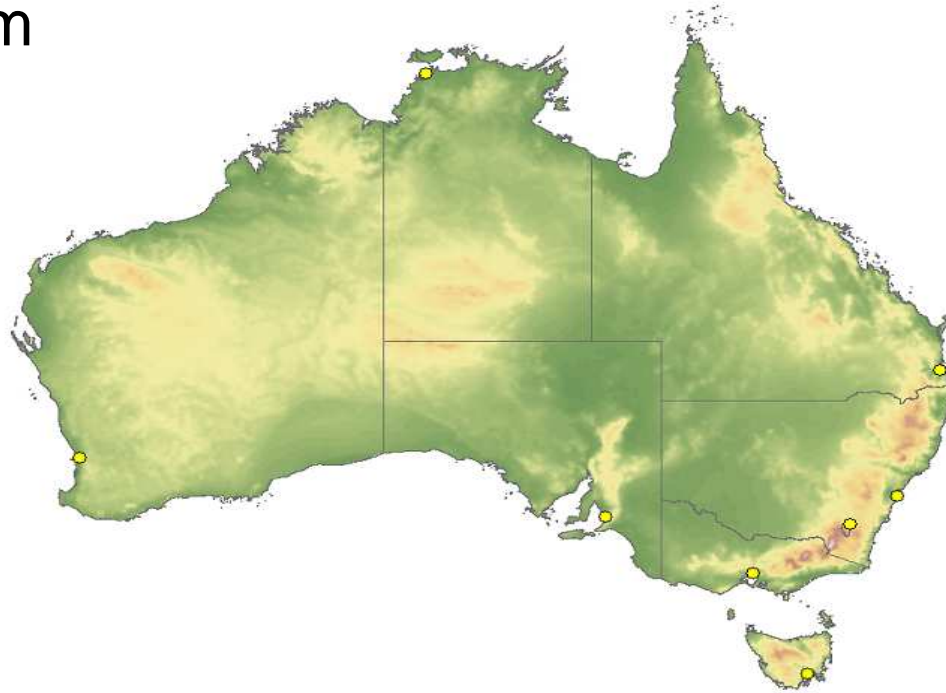
A collaboration between AWI, GRDC, MLA, RIRDC and Dairy Australia

[Home](#) | [Help](#)

Go to Pastures Australia web site

[www.pasturepicker.com.au](http://www.pasturepicker.com.au)

If you want to select a pasture species for your farm



[New South Wales / ACT](#) | [Northern Territory](#) | [Queensland](#) | [South Australia](#) | [Tasmania](#) | [Victoria](#) | [Western Australia](#)

## Summary

- Grow more feed – density, fertility, grazing
- Get the quality right – 12 MJ ME/kg dm
- Graze to phase II
- Measure kg/ha dm and ME
- Work out your feed demand
- Don't waste pasture



## Toolbox

- MLA Feed Demand calculator
- MLA Cost of production calculator
- [makingmorefromsheep.com.au](http://makingmorefromsheep.com.au)
- Pasture picker
- Better Fertiliser decisions –[www.asris.csiro.au](http://www.asris.csiro.au)
- MLA Rainfall to Pasture Growth Outlook Tool
- **Eyes – for looking below your knees**
- **Fingers – for condition scoring sheep**