

It's ewe time!

Making More From Sheep



Turning Pasture *into* Product

Daniel Schuppan
Rural Solutions SA Jamestown

Event partners:



Event supporters:



State primary industry agencies

2007 Case Study

Cockaleechee Lower EP

18ha Paddock

Sown 3rd May, 18kg Italian ryegrass sown into poor Lucerne stand and self sown oats

80kg DAP at sowing, 60kg of urea during the season

Cost \$162 ha

Stocked with 200 ewes (Ewes started lambing mid July)

Paddock Grazed from 30th June 27th November

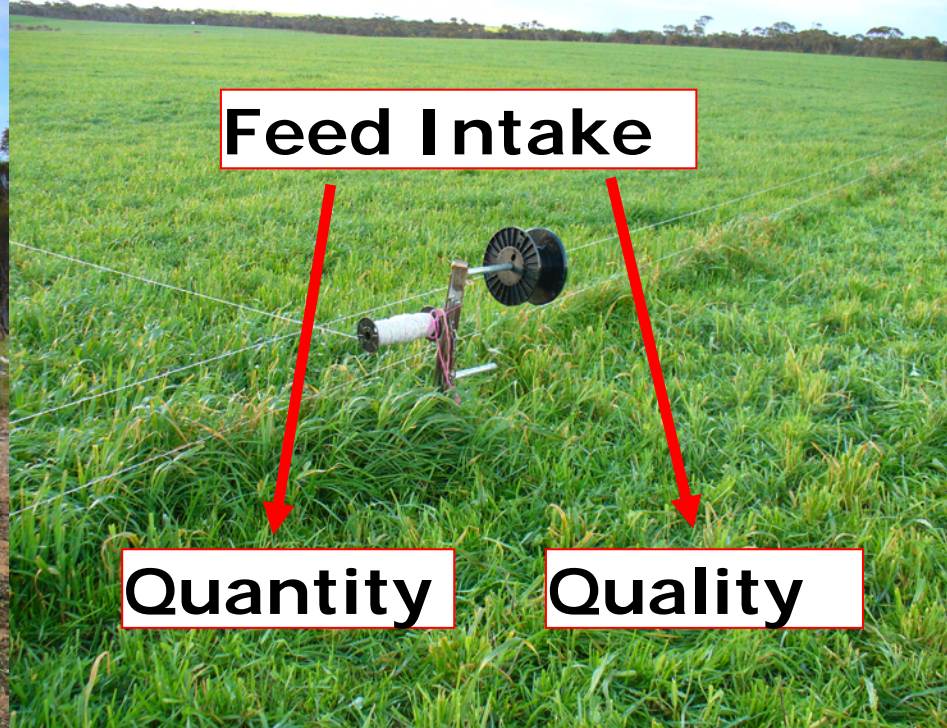
Result – 5000kg of dry matter utilised / ha

Lambs grew at approx 280-310 grams LW per day

205 kg of DW lamb per ha @ \$4kg **\$820/ha**



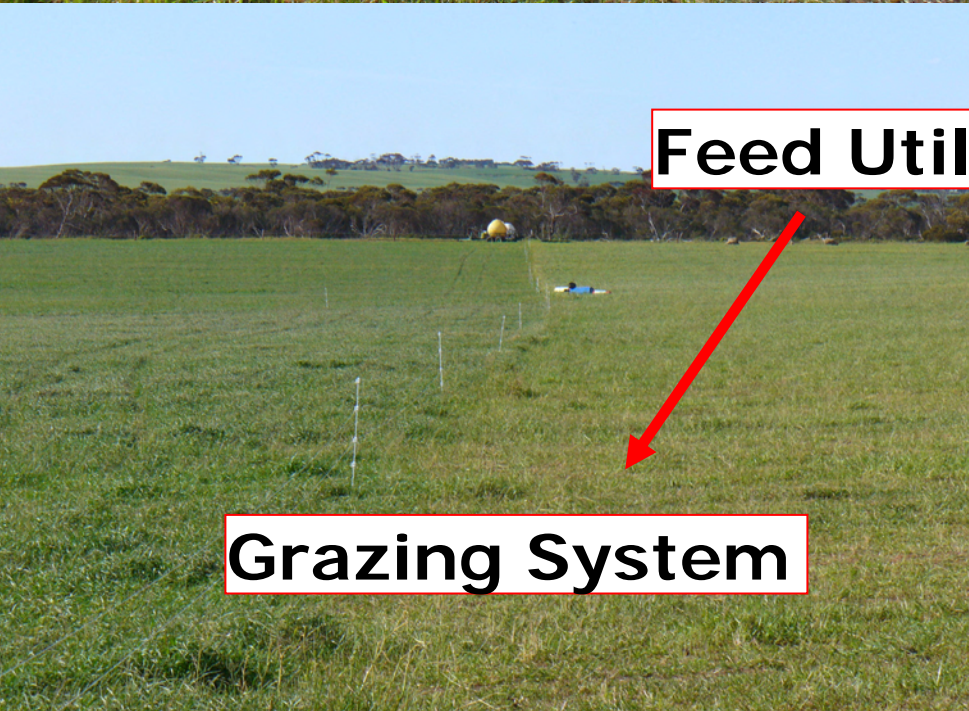
Water



Feed Intake

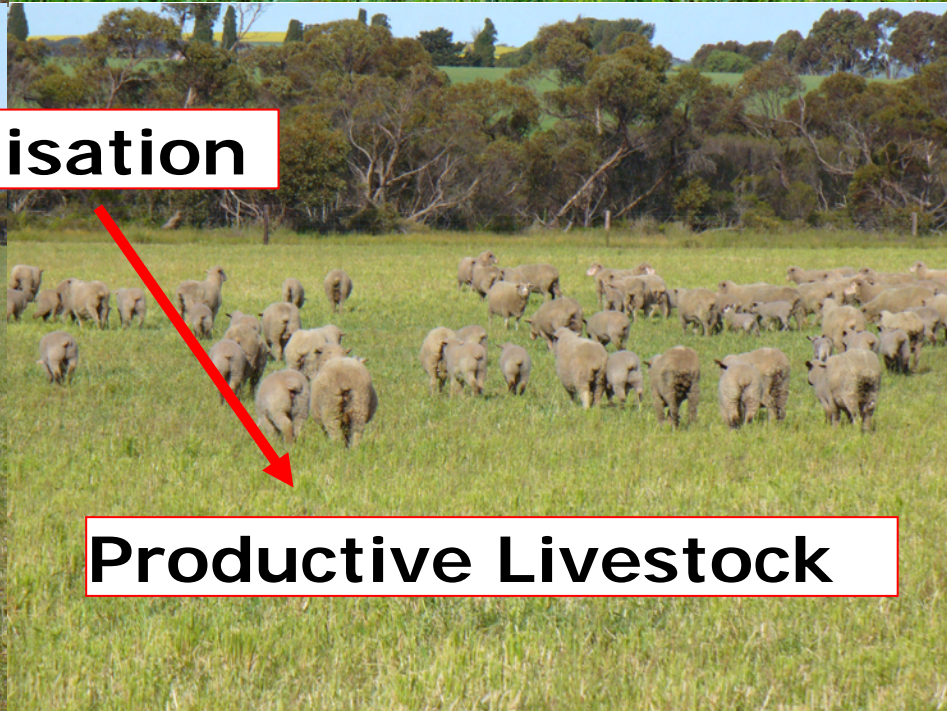
Quantity

Quality



Feed Utilisation

Grazing System



Productive Livestock

Water Systems – Quality & Quantity

Mob size (DSE)	Recommended Flow rate L per second
1000-2000	1-1.5
2000-3000	1.5-2
3000-5000	2-3
Greater than 5000	3

Salinity

Maximum for healthy growth

Lambs, weaners, lactating
ewes

5000-6000 ppm

Adult dry sheep

10,000 -13,000 ppm

Watering Systems – Quality & Quantity



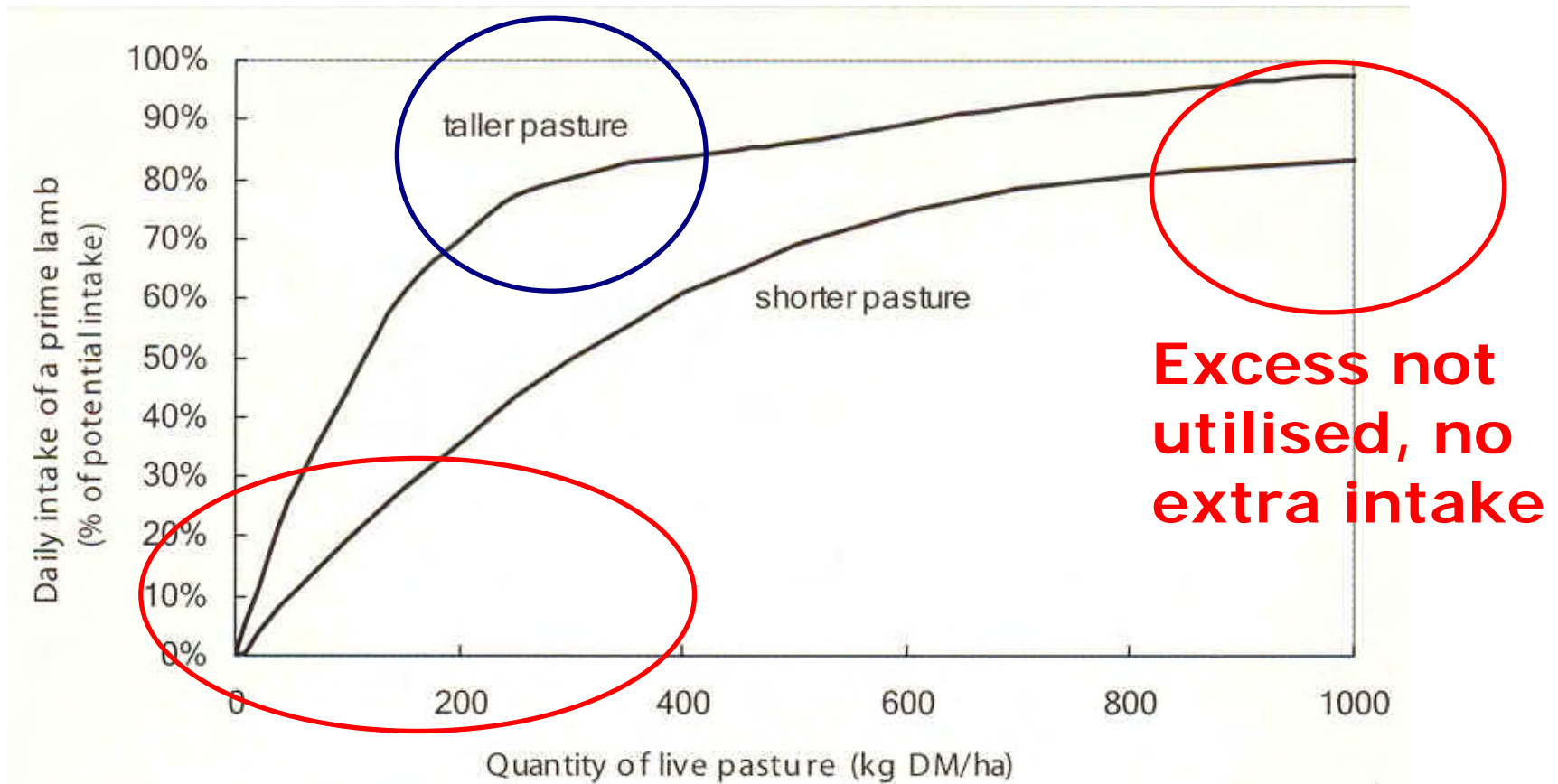


Quantity of Feed – Pasture Intake

- **Pasture too low – intake affected**
 - Cannot eat enough pasture, spend more time harvesting
 - 11-13 hours per day grazing
- **Pasture too high – Under utilising**
 - Reach maximum gut fill
 - Selectively grazing
 - Quality declines



Quantity of Feed - Pasture Intake



**Insufficient consumed
needs not met**

Quantity of Feed – Grow More



- Plant density
- Fertility
- Pest & disease
- Productive pastures
- Composition
- Leaf area
- Ground cover

Measure, Monitor, Manage

800 kg DM

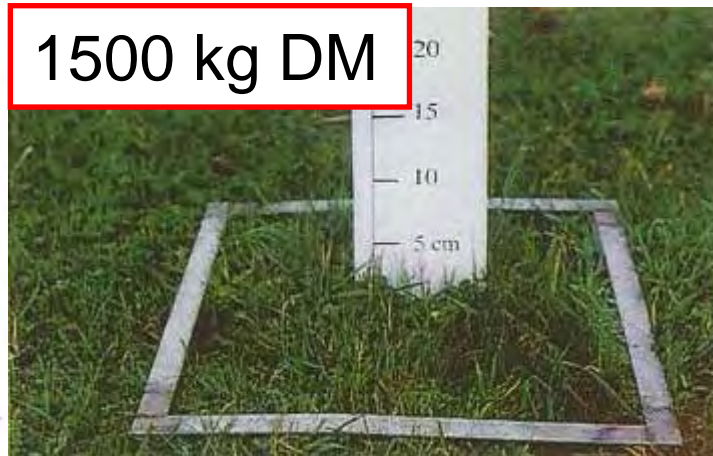
800 kg DM

MLA Pasture Ruler
Pasture Height to Pasture Quantity Indicator

See other side of ruler and "Tips & Tools" provided for information about how to use this ruler to predict annual performance and income.

Height (cm)	kg DM/ha	Stocking rate (kg DM/head/ha)
14	3000	100
12	2500	83
10	2200	73
8	1900	63
7	1700	57
6	1600	53
5	1400	47
4	1200	40
3	1000	33
2	700	23
1	400	13

Figures are estimates only. Very dense, young pastures and those with high water content can be over 100% kg DM/ha at the same height. Conversely, well grazed pastures, especially those with high water content, can be under 100% kg DM/ha at the same height.

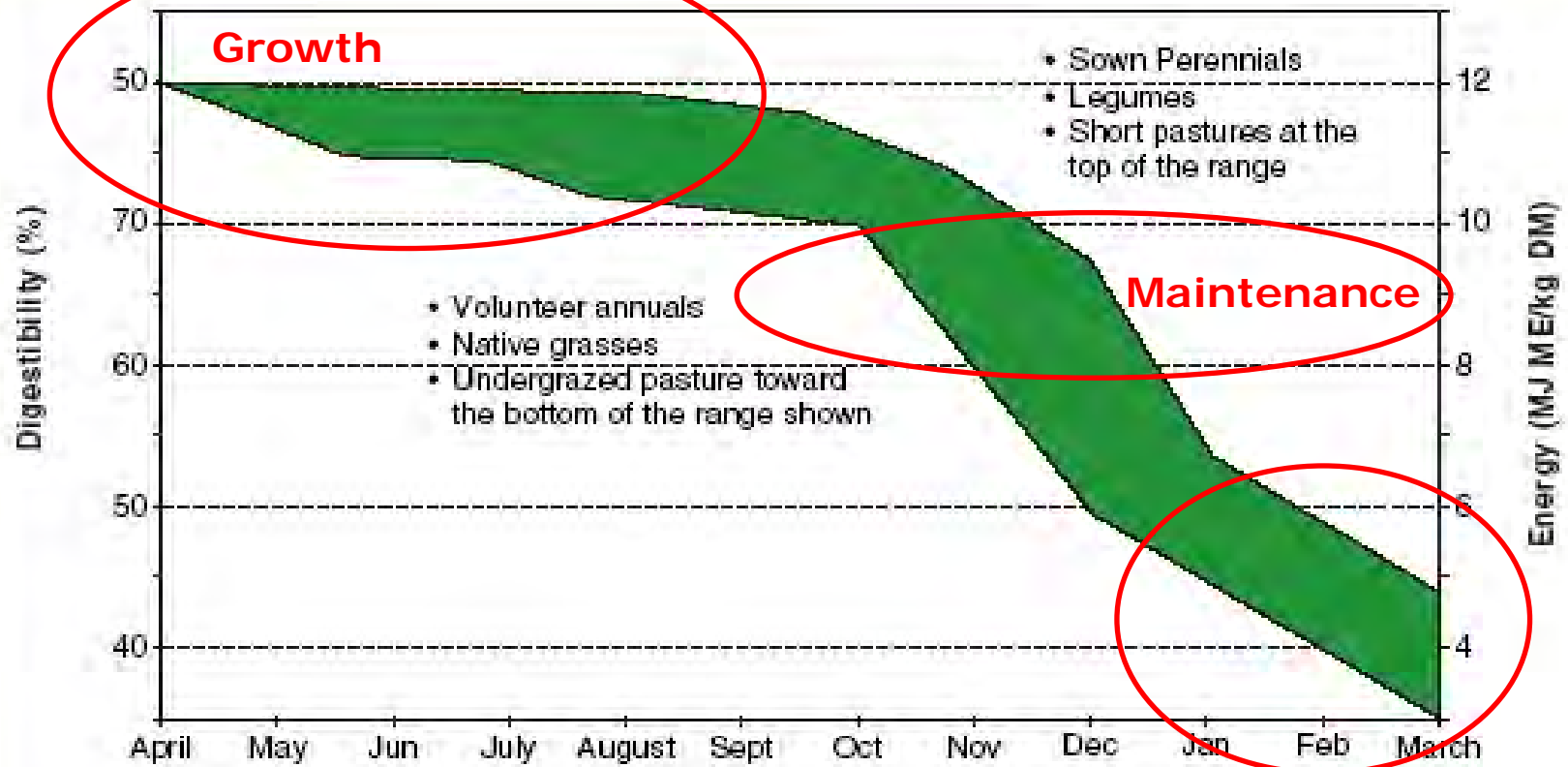


Feed Quality – Pasture Intake

- Measure of quality is digestibility
- Digestibility is related to energy
- Digestibility influences the time feed spends in the rumen
- Pasture intake is greater on high quality pastures
- Pasture species, stage of growth and % legume affect ME
- Complete feed analysis for improved understanding
- Mineral balance for plant and animal

Pasture Quality Declines as Plant Matures

Making More From Sheep



Quantity and Quality of Feed

Herbage Mass Benchmarks kg green DM/ha

Stock Class	High Quality 75 % Digestible	Moderate Quality 68 % Digestible	Poor Quality 60% Digestible
Lactating Ewes			
Singles	1000	1700	NS
Twins	1500	2000	NS



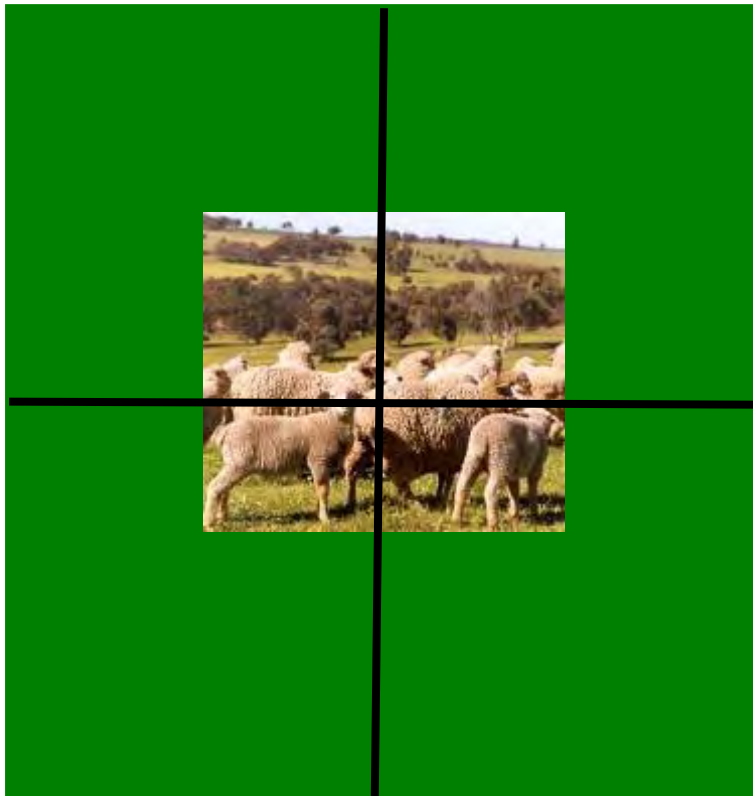
Grazing System



- Paddock split into four cells (approx 4.5ha each)
- Used temporary electric fencing
- Rotated every 5-15 days
- Even grazing
- Stocking Rate 33 DSE ha
- **Stocking Pressure 133 DSE ha**
- **Kept between 800kg and 2000kg DM/ha**

Stocking Rate verses Stocking Pressure

18 ha paddock – 600 DSE



18ha

Stocking Rate = 33 DSE/ h

Stocking Pressure = 33 DSE/ ha

9 ha

Stocking Rate = 33 DSE / ha

Stocking Pressure = 66 DSE/ ha

4.5 ha

Stocking Rate = 33 DSE / ha

Stocking Pressure = 133 DSE/ ha

Phases of Pasture Growth

Quantity: Low
Quality: High

PHASE I

Slow growth
after grazing

Quantity: High
Quality: Low

PHASE III

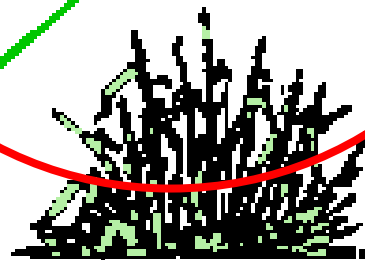
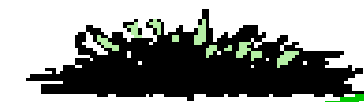
Slow growth due
to shading of
growth points

PHASE II

Rapid growth due
to high leaf area

(800–1400 kg/ha DM or 2–3 cm)

(1800–2500 kg/ha DM or 5–7.5 cm)



TIME (weeks)





Utilise Feed with Productive Livestock

A Grazing System Should:

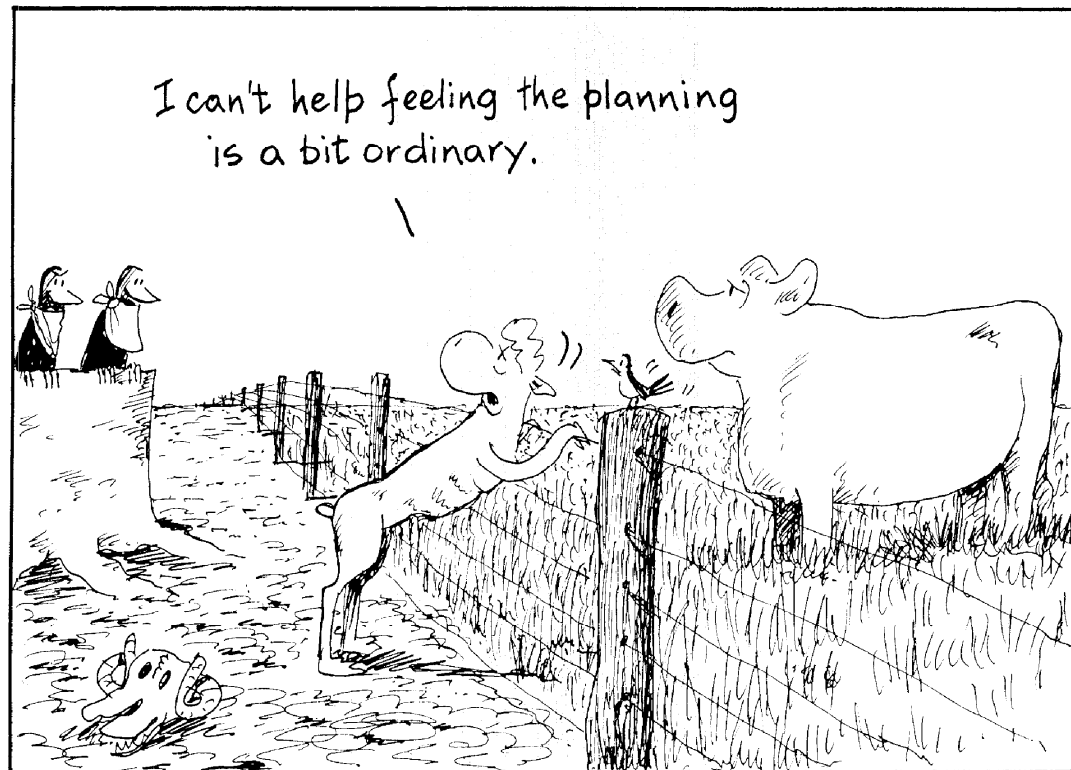
- Keep green pasture in phase 2
- Rest periods
- Use productive livestock
- Achieve livestock weight and fat score targets
- Maintain at least 70% ground cover
- Ensure persistence of desirable species
- Will involve a mix of continuous and rotational grazing – ie is flexible
- Maximise feed utilisation

Methods of Increasing Feed Utilisation

Priority	Cost	Example
<p>1 Change that improves conversion of current pastures into wool or meat</p>	<p>Low cost \$10/ha</p>	<p>Time of lambing Weaner management Genetics Sheep sale times Flock structure</p>
<p>2 Increase the productivity of existing pastures</p>	<p>Moderate cost \$50 / ha</p>	<p>Increase stocking rate Rotational grazing Fencing & water Increase fertiliser</p>
<p>3 Improve pasture productivity by introducing more productive species</p>	<p>High Cost \$250 / ha</p>	<p>Sowing new pasture varieties or renovating existing pastures</p>

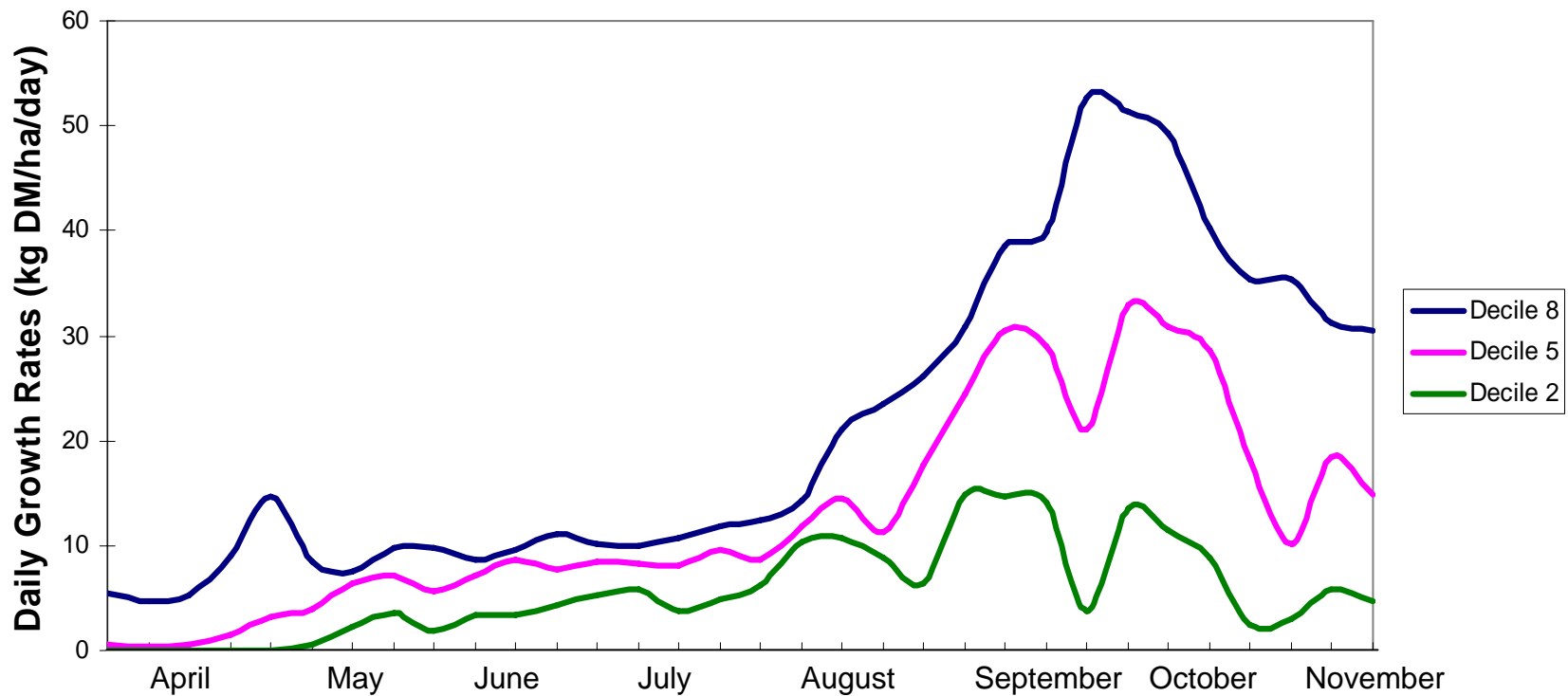
Feed Budgeting

- Livestock – What do your stock require
- Pastures – How much feed do you have
- Whole Farm
- Or Individual Paddocks

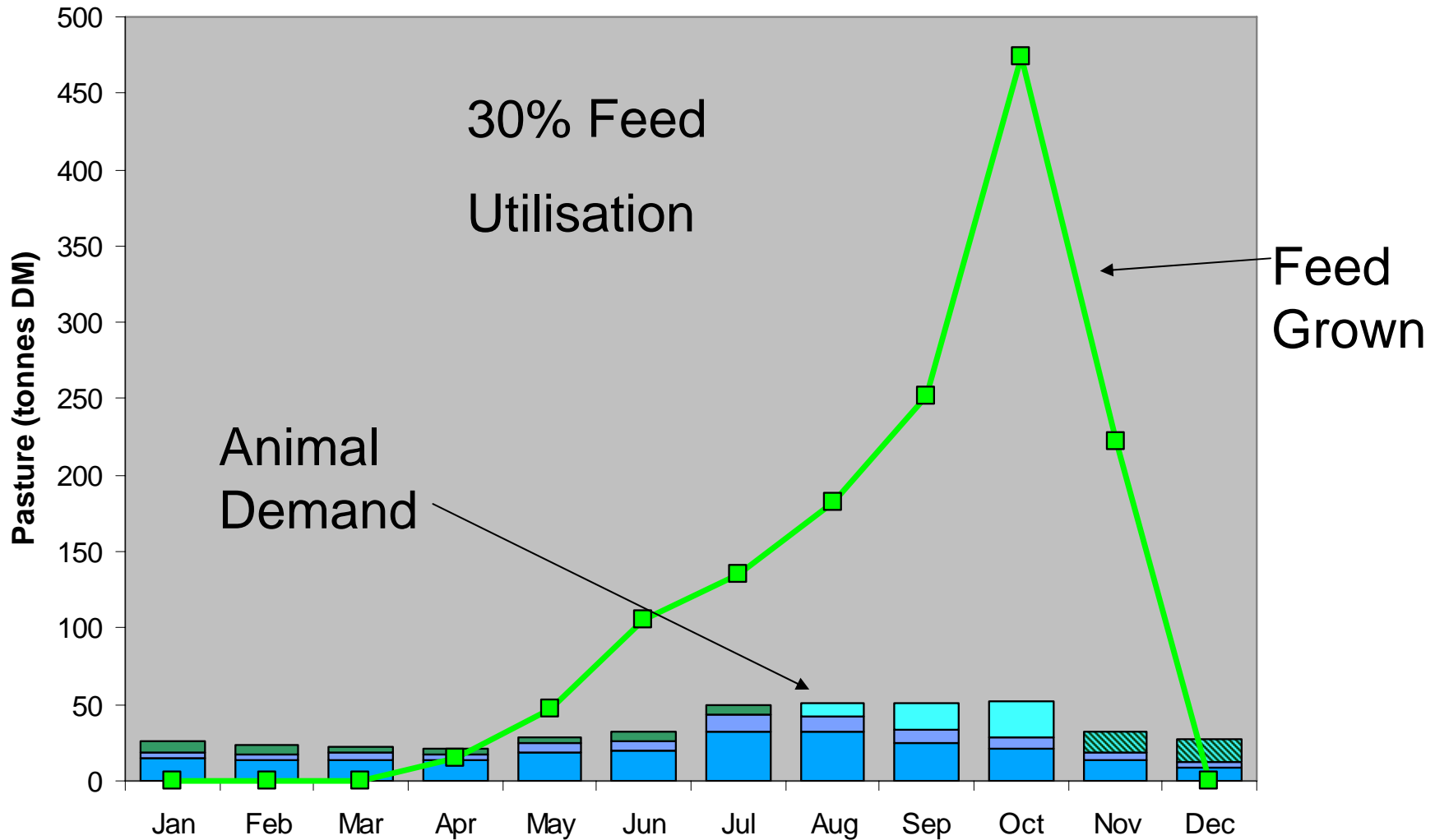


Know Your Feed Supply

**Pastures from Space Daily Pasture Growth Rates 1995-2009
Eudunda / Robertstown / Burra**



Planning – MLA Feed Demand Calculator



Sign Post

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lifetimewool
more lambs, better wool, healthy ewes



PROGRAZE
Profitable, sustainable grazing

MODULE 8: Turn Pasture into Product

What does this module do for you?



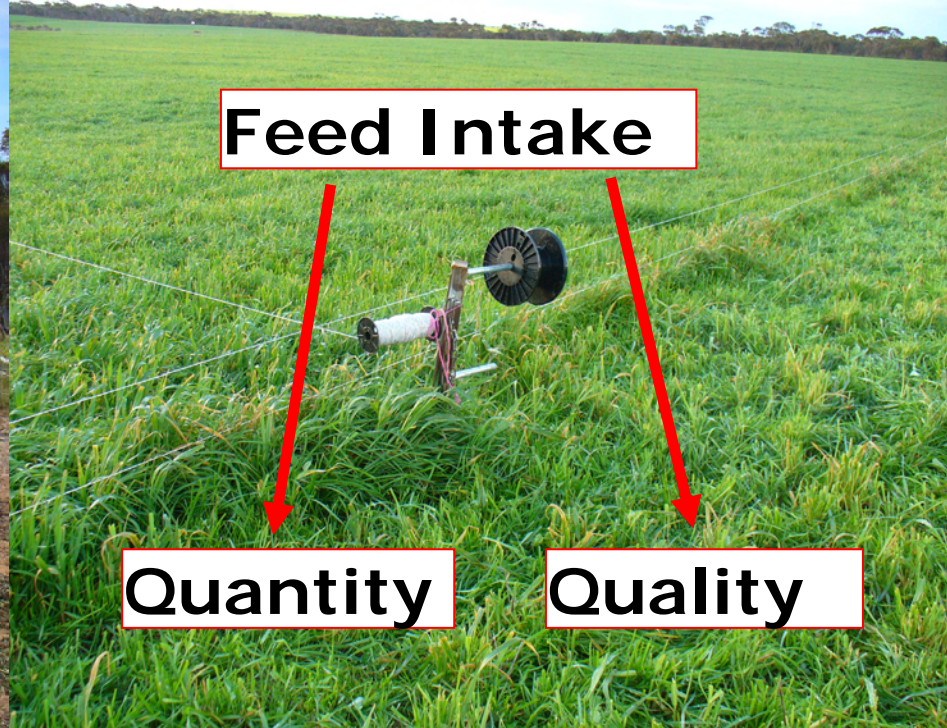
MODULE 7: Grow More Pasture

What does this module do for you?





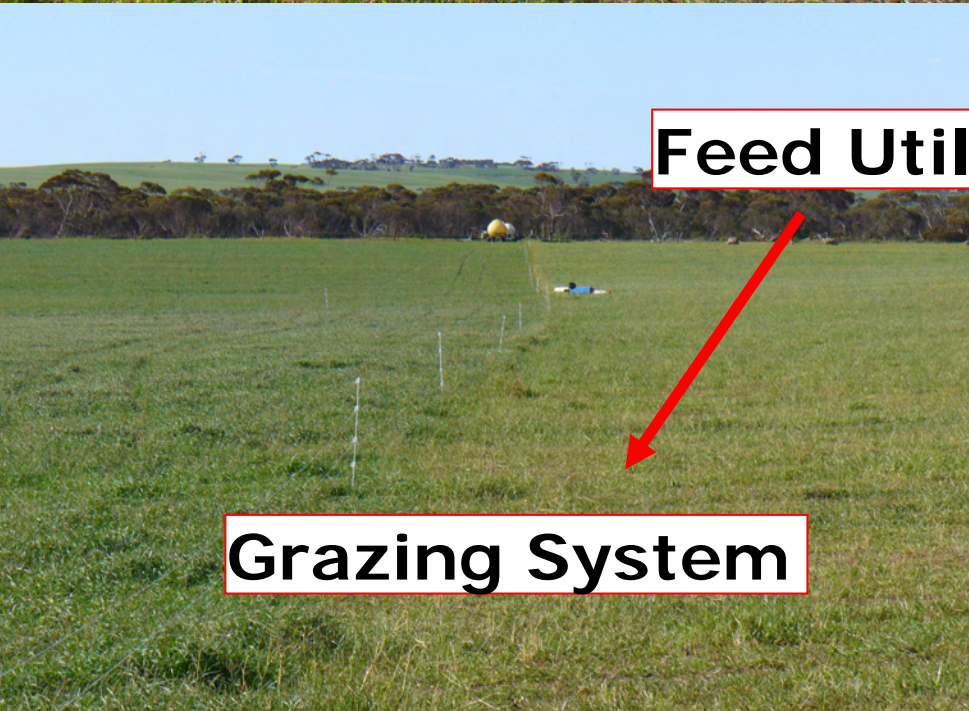
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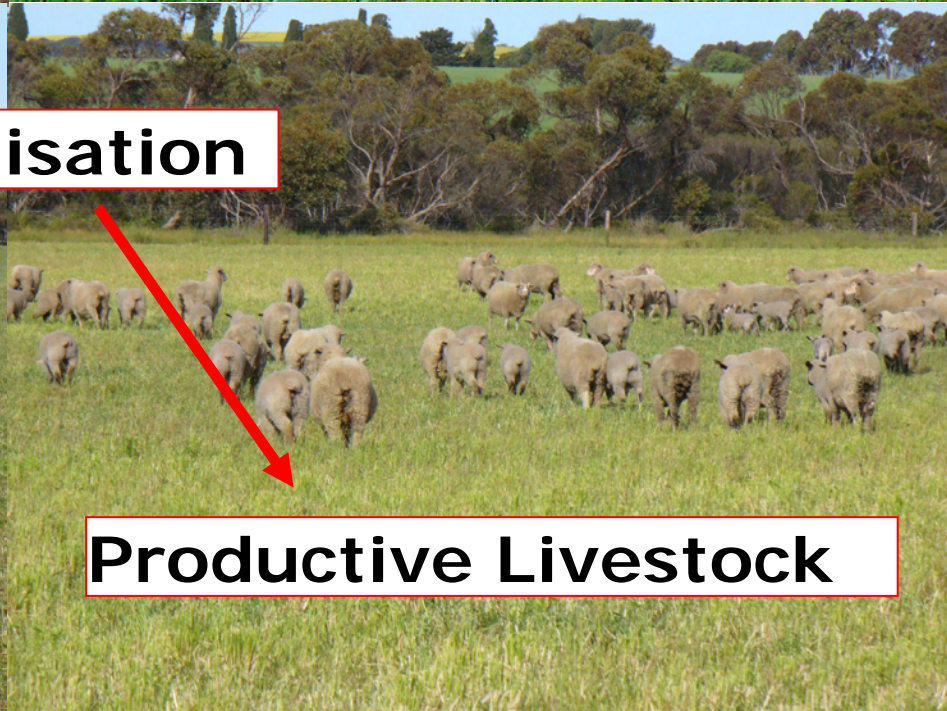
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