

meatup FORUM

For the latest in red meat R&D

Filling summer-early autumn feedgaps with tropical perennial grasses

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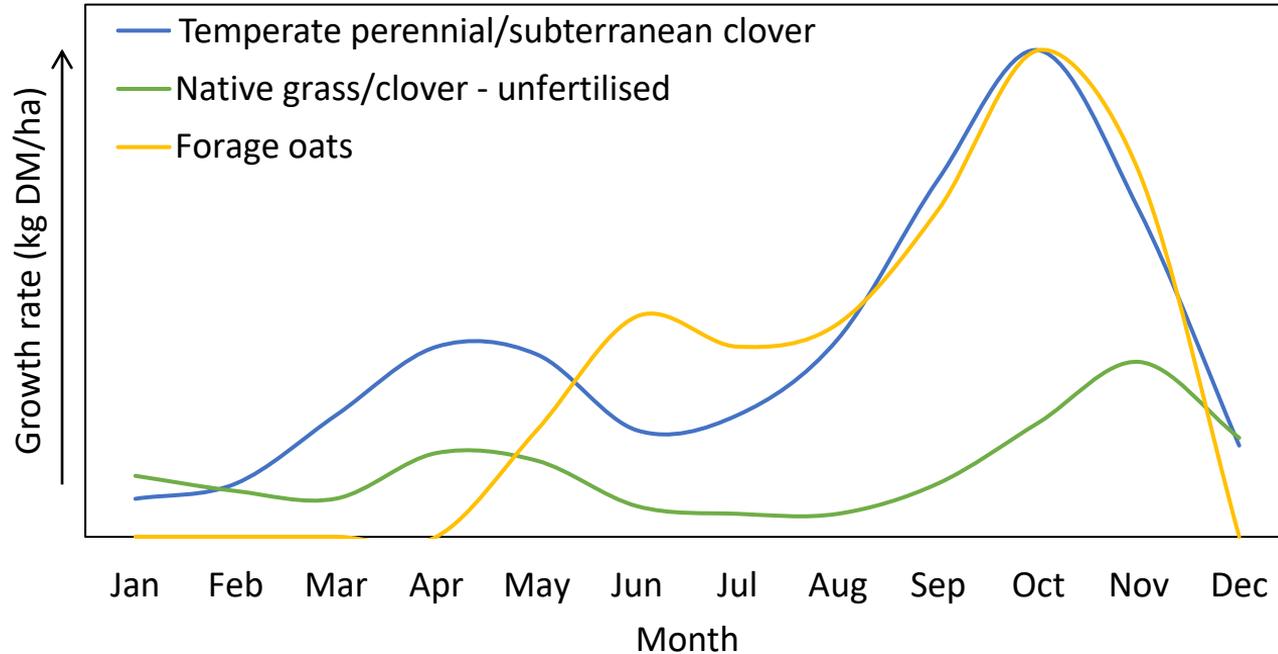
Photo: L. McCormick

Benefits

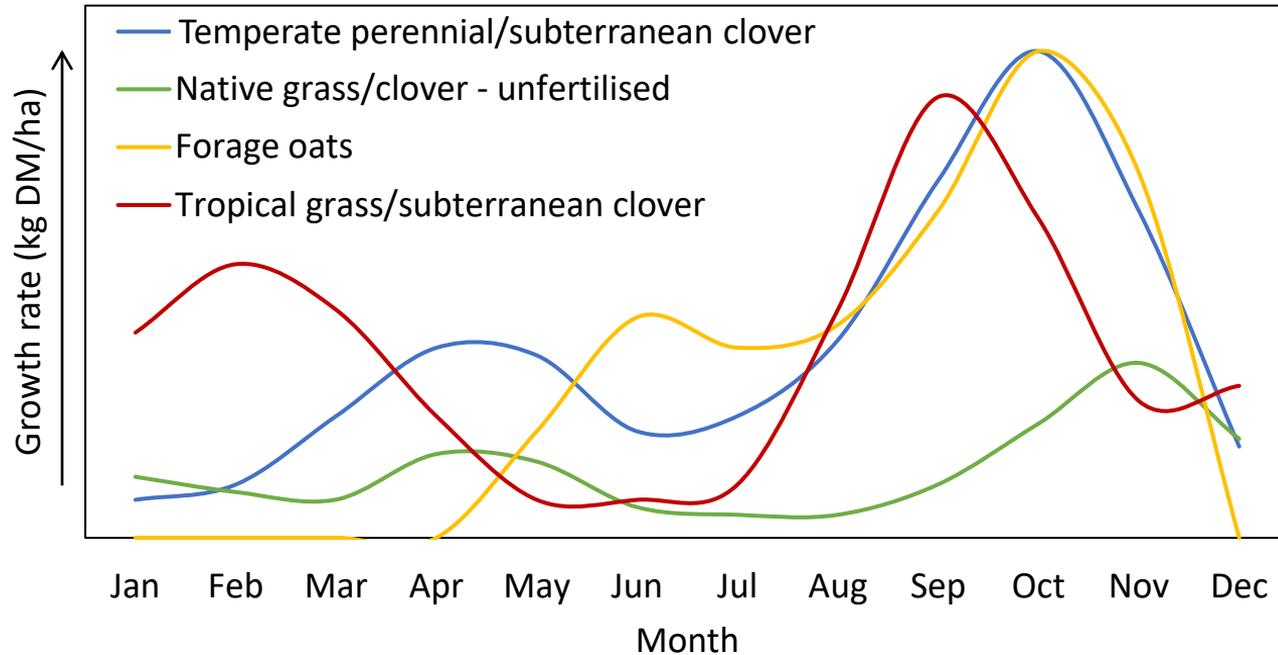
- High growth rates in response to summer rainfall
 - Green feed & hold leaf in dry times
 - Rest temperate pastures
 - Control weeds & reduce runoff
 - $\text{pH}_{\text{Ca}} > 4.5-7$
- High ground cover
- Acid soil tolerant
- Drought persistent



Mix & match for a full feed-year



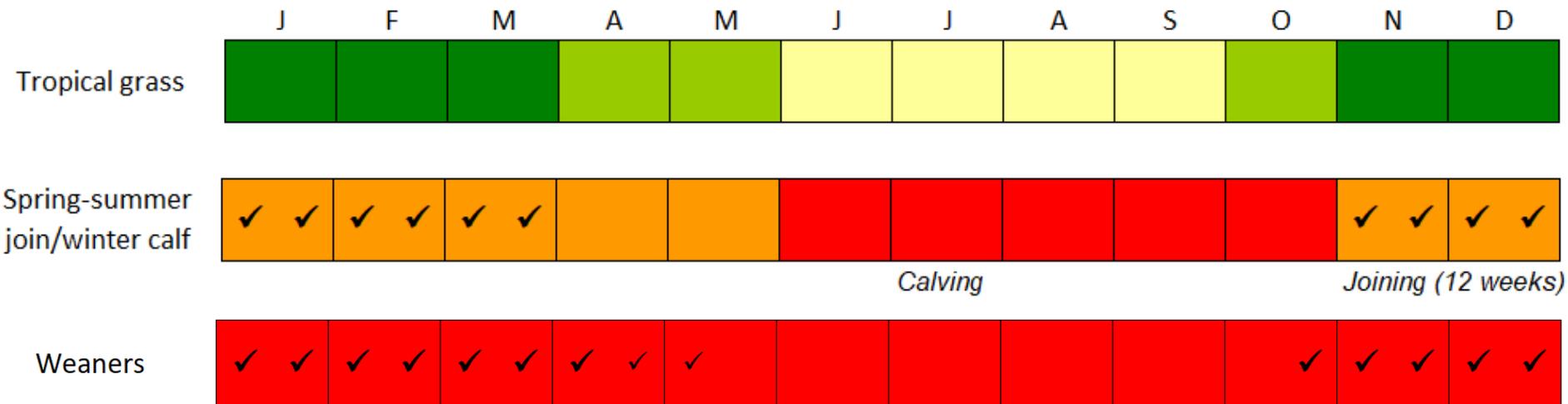
Mix & match for a full feed-year



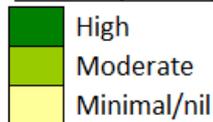
Mix & match for a full feed-year



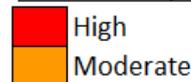
Cattle enterprises & tropical grasses



Potential pasture growth rate and quality



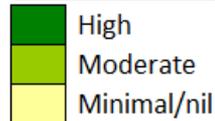
Animal feed quality requirements



Sheep breeding & tropical grasses



Potential pasture growth rate and quality



Animal feed quality requirements



Challenges

- Only grow during the summer → Add a winter legume
- Some don't like waterlogging, especially during winter → Consider position in the landscape
- Lower nutritive value → Graze to keep it vegetative



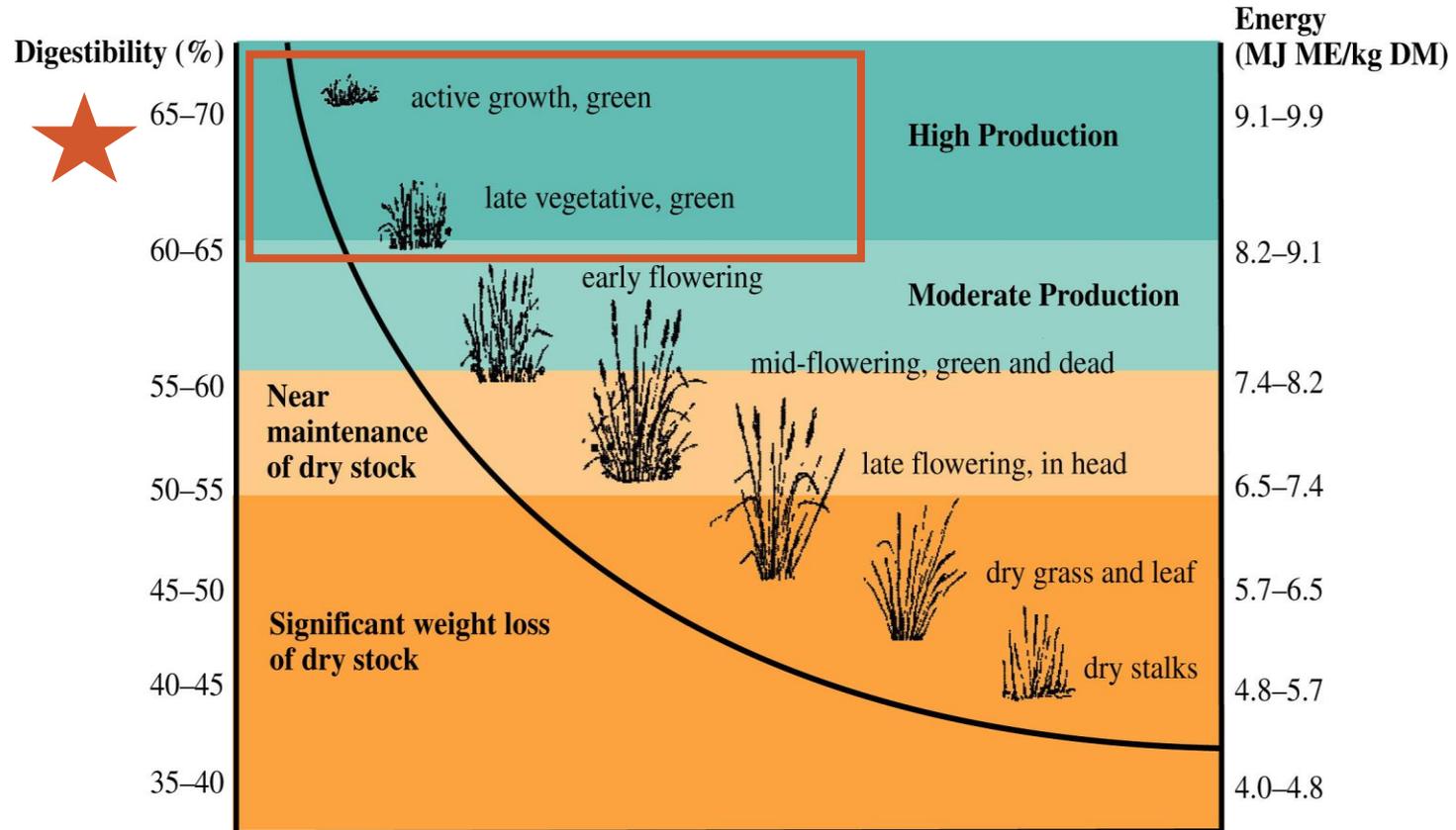
“There’s 180 cattle there somewhere...”

Nutritive value suitable for animal production

Grass	April 2019				March 2020 (post drought)			
	NDF	ADF	CP	ME	NDF	ADF	CP	ME
Kikuyu	50	22	20	10.6	53	27	22	9.9
Digit grass	54	28	11	9.5	44	22	25	11.4
Bambatsi panic	57	25	10	9.0	61	31	20	9.1
Panic grass	48	24	14	9.1	60	31	19	9.2
Rhodes grass	63	28	11	8.6	51	26	23	11.0

- ✗ NDF is high
- ✓ Crude protein associated with N input
- ✗ Metabolisable energy is the weak link

Digestibility declines as tropical pastures mature



N required for ongoing production

- Need 50-100 kg N/ha/yr
- Choose an adapted legume

50 kg N fixed/t DM → 18 kg N available/t DM
∴ we need ~4 t DM/ha

- Actively manage the grass in late summer – early autumn
- Actively manage the legume in spring



Establishment – prior planning and preparation

1. Which paddock?
2. What are the consequences of this change to my current feedbase?
3. Need minimum 2 year lead time



Establishment – control summer grass weeds

Minimum two years required



Control for **2 summers**

15 seeds/m²

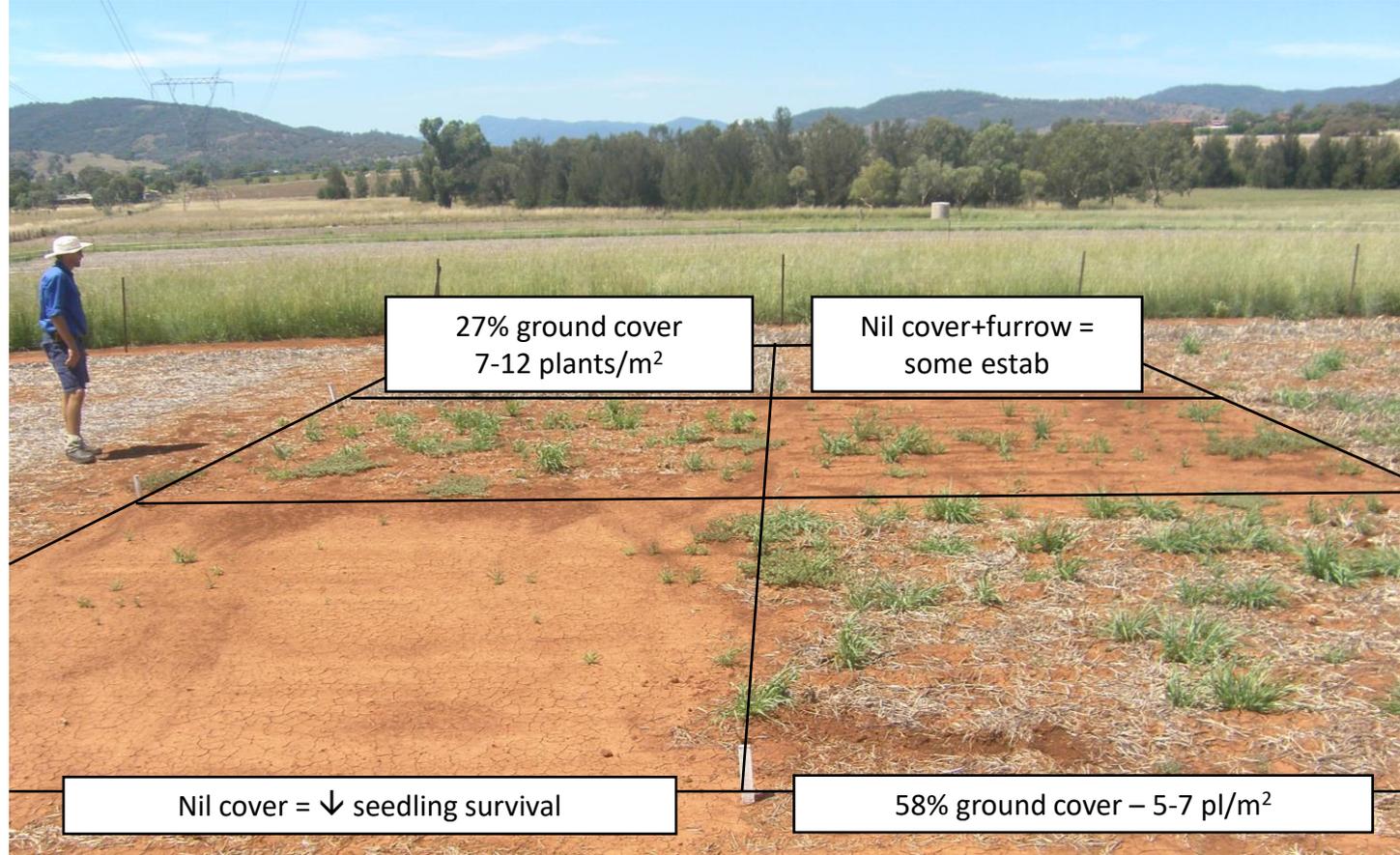
Control **spring only** prior to sowing

5,550 seeds/m²

Control for **1 summer**

1,650 seeds/m²

Establishment – store soil water & maintain cover



Establishment – choose adapted species

Species & cultivar	Light soils Sands & sandy loams pH _{Ca} <5.0–6.0	Medium soils Clay loams & silty clay loams pH _{Ca} 5.0–7.0	Heavy soils Red/grey clays & black earths pH _{Ca} 6.0–8.0
Drier/hotter areas			
Bambatsi panic		✓	✓
Digit grass cv. Premier	✓	✓	
Kikuyu cv. Whittet	✓	✓	✓
Rhodes grass cvv. Katambora & Reclaimer	✓	✓	
Panic cvv. Gatton & Megamax 059		✓	✓
Wetter/milder areas			
Bambatsi panic		✓	✓
Digit grass cv. Premier	✓	✓	
Kikuyu cv. Whittet	✓	✓	✓
Panic cvv. Gatton & Megamax 059		✓	✓ (not Orange)



Establishment – sow shallow in late spring



Historic occurrence of rainfall



How often did we receive 25 mm over a 7 day period for years 1990-present?

For each month December-March: average 56% of years

How often by 1 March if I sow:

- a) 1 December?
- b) 1 February?

Logged in as: suzanne.boschma@dpi.nsw.gov.au

Settings

How often?

Q How often do we receive...

Rainfall

over a

at

between

and

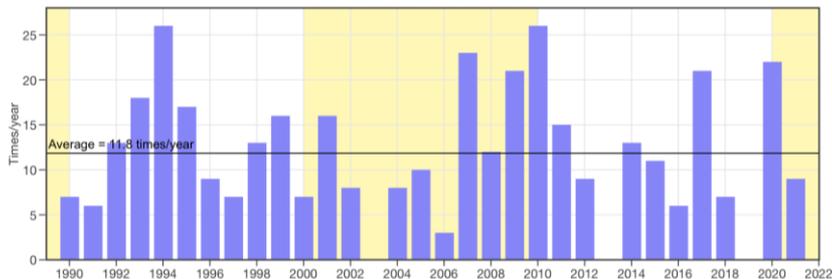
for years



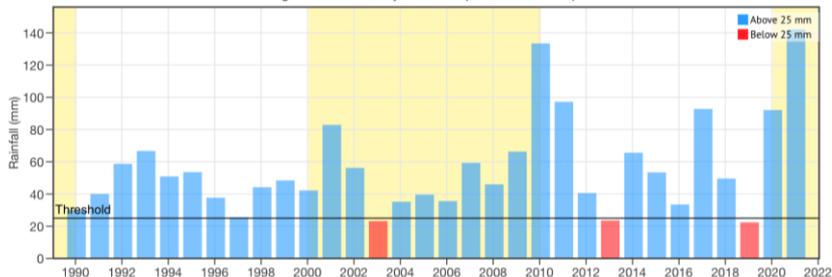
1 December – 1 March = 88% of years

(Times > 25mm Rainfall occurs over 7 Consecutive Days, 1 Dec-1 Mar (276 days))

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Highest total 7 day Rainfall (1 Dec to 1 Mar)



How often?

Q How often do we receive...

Rainfall

over a

at

between

and

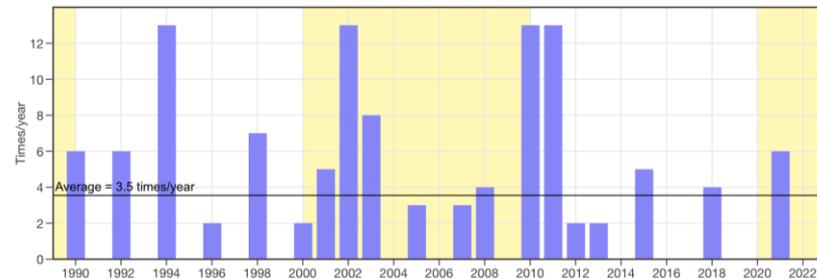
for years



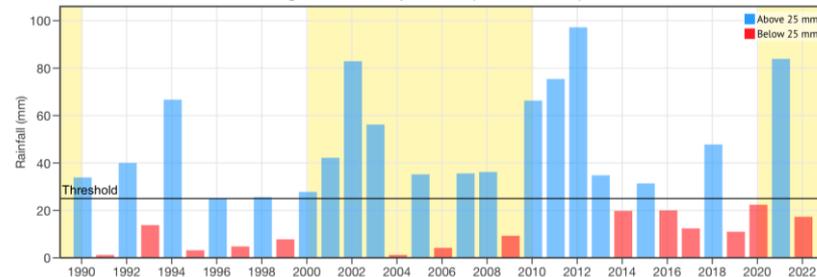
1 February – 1 March = 58% of years

(Times > 25mm Rainfall occurs over 7 Consecutive Days, 1 Feb-1 Mar (29 days))

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Highest total 7 day Rainfall (1 Feb to 1 Mar)



Establishment...

Nothing beats prior planning & preparation

Short cuts can be costly

Be patient – don't write it off too soon



Take home messages

Tropical grass pastures...

1. Provide green feed in summer-early autumn
2. Can provide quality feed for livestock while they are vegetative
3. Suitable for many livestock enterprises

Keen to trial tropicals?

Prior planning & preparation essential – treat it like a crop

Tools and resources

Henty, April 2022



Producer Demonstration Site
(PDS) project

