

Leading Sheep MeatUp Forum

LONGREACH, FRIDAY 25 MARCH 2022



Managing sheep feed intake and nutrition requirements from joining to weaning

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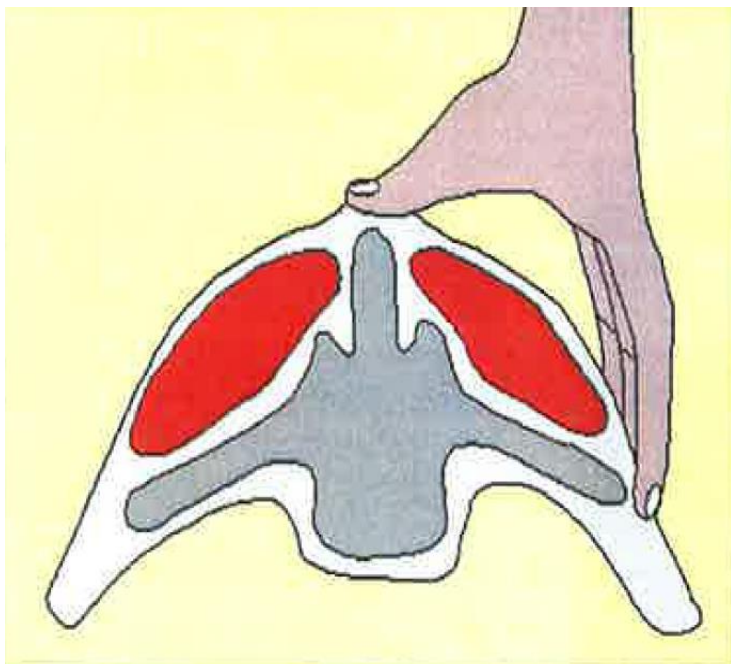


Energy requirements of a merino ewe

TABLE 1a. Energy Required by Ewes @ Condition Score 3 to maintain weight								
Maintenance energy (MJ/d) for ewes under drought paddock conditions							Confinement Fed	
Day of pregnancy	small frame (45kg) maintain @ CS 3		medium frame (50kg) maintain @ CS 3		large frame (60kg) maintain @ CS 3		medium frame maintain @ CS 3	
	single	twin	single	twin	single	twin	single	twin
dry	7.4	7.4	8.0	8.0	9.3	9.3	6.7	6.7
50	7.6	7.8	8.4	8.6	9.7	9.9	7.0	7.2
70	8.0	8.4	8.7	9.1	10.1	10.7	7.4	7.9
100	9.0	10.2	9.9	11.1	11.5	12.9	8.6	9.8
130	11.3	14.1	12.3	15.4	14.4	17.7	10.9	14.1
days lactating	maintain @ CS 3		maintain @ CS 3		maintain @ CS 3		ewes and lambs	
	single	twin	single	twin	single	twin		
10	17.3	21.7	18.7	23.4	21.5	26.9		
30	18.7	23.9	20.2	25.8	23.2	29.6		
50	15.5	19.1	16.7	20.6	19.2	23.7		
							ask for advice on confinement feeding ewes and lambs	

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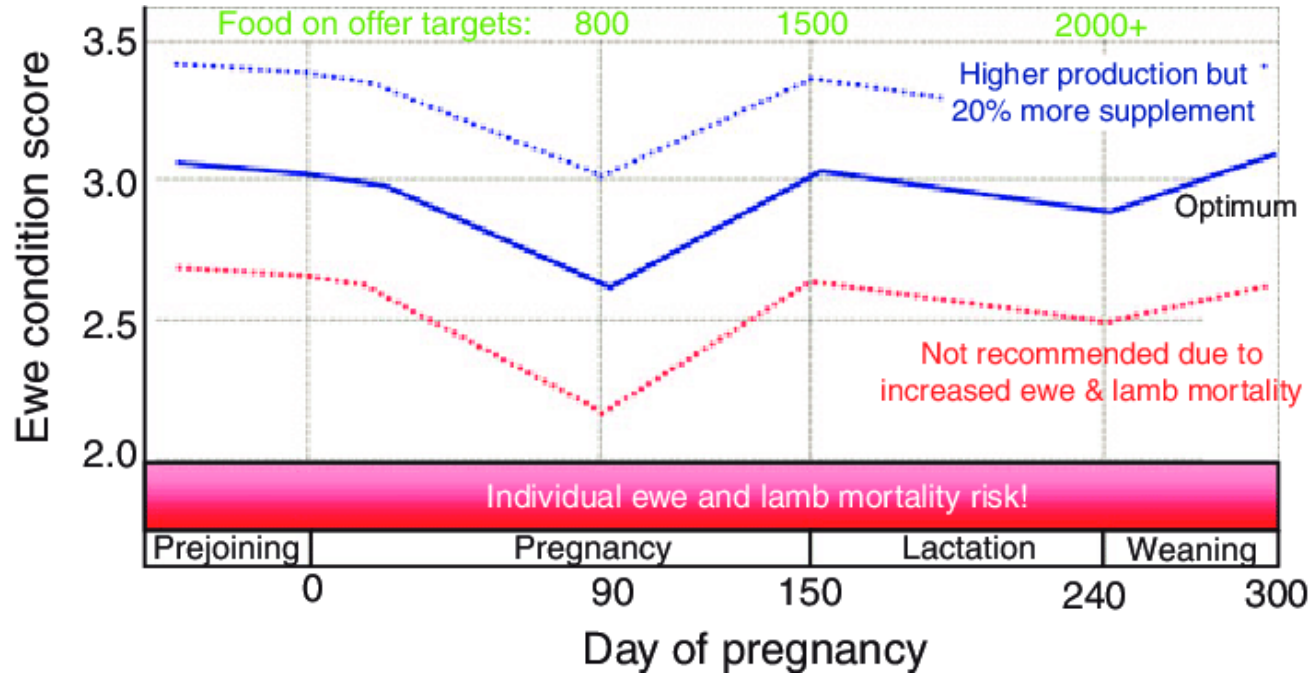
Condition score



- Measure of fat and muscle
- **NOT** Fat score – this measures fat cover only over the long rib



Condition score profile (Lifetime Wool)



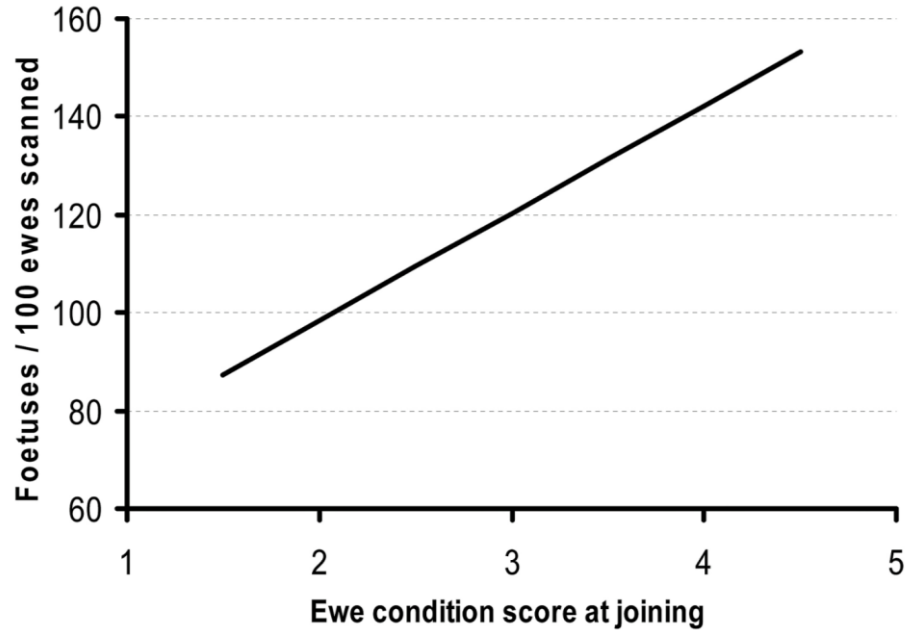
Ewe recovery

- Maximum recovery on pasture is 0.3 CS/month
- Join at 3.3 to 3.5 - in a good year.
- 1 condition score = 9 kg of fat and muscle.
 - 1 kg fat = 33 MJ
 - 33 MJ x 9kg = 300 MJ
 - 300 MJ x 4c/MJ = \$12
- Peak lactation for twin bearing ewe > 30 MJ/day

- *The foundations for the next generation*

Ewe condition

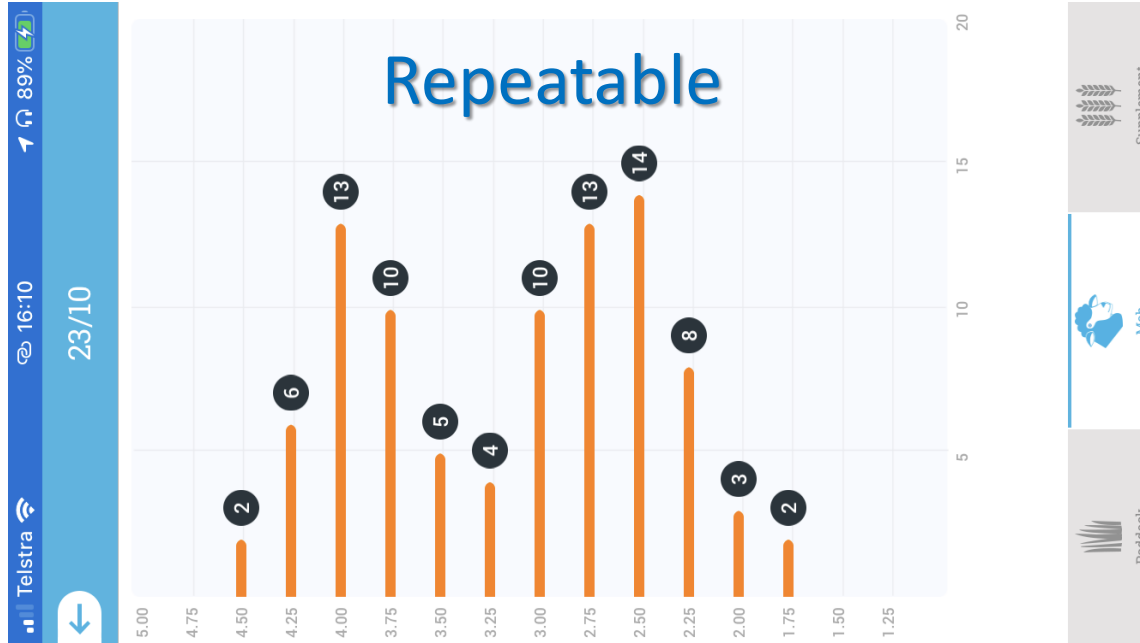
- **Condition score**
- Manage post-weaning
- +1CS = 20 extra lambs / 100 ewes
- 1 CS = approx. 15% SRWT



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A dual purpose self-replacing merino flock is still #1

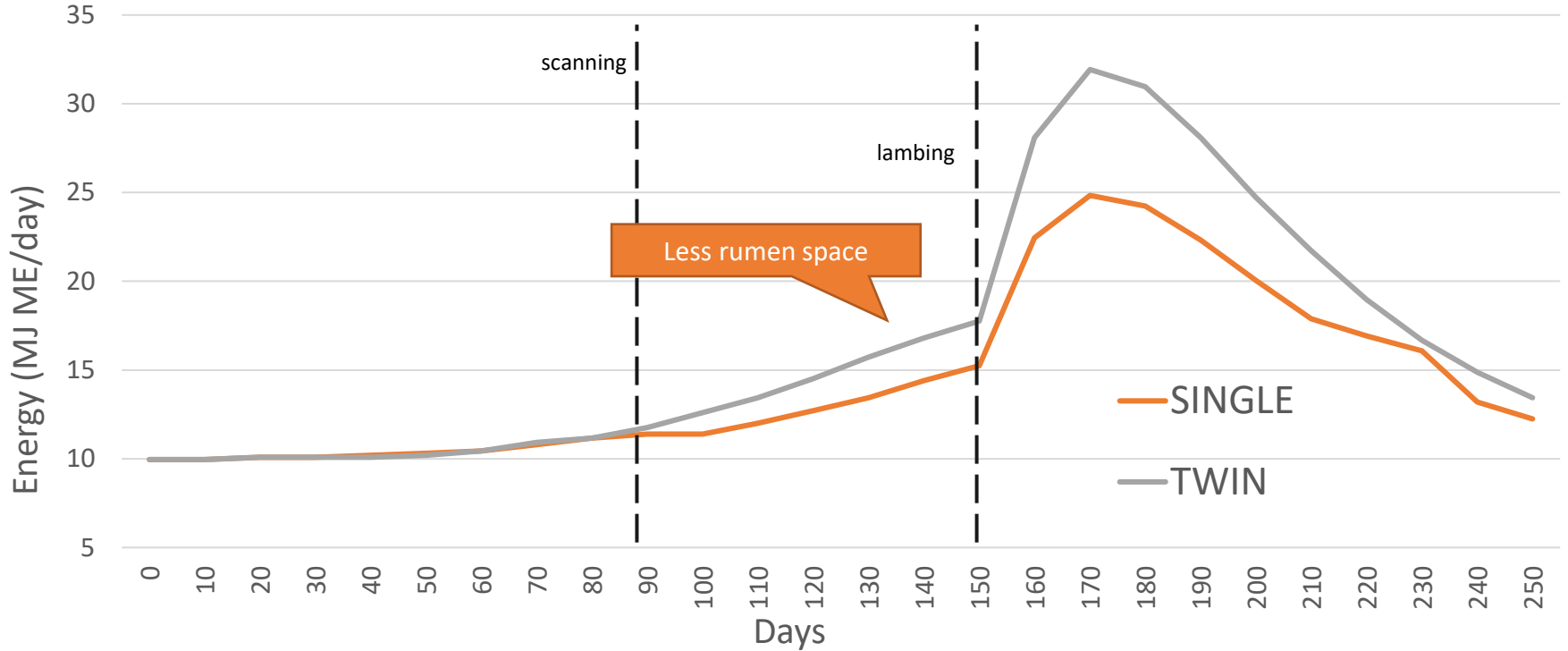
Dry single and twin ewes @ day 65 lactation



Meeting the ewes requirements

- 1. Determine ewe's energy requirements**
2. Assess pasture for quality & quantity
3. Calculate surplus/deficit and feed appropriately

Energy requirements for 60kg ewe



Energy

1. Assess pasture for quality & quantity
 - Match pasture growth to peak stocking rate
2. Determine ewe requirements to meet CS 3+
3. Calculate surplus/deficit and feed appropriately

ENERGY – can be neither created nor destroyed

- Carbohydrate – good levels found in maturing good quality feed, cereal grain and specific supplements

Ewe and lamb mortality

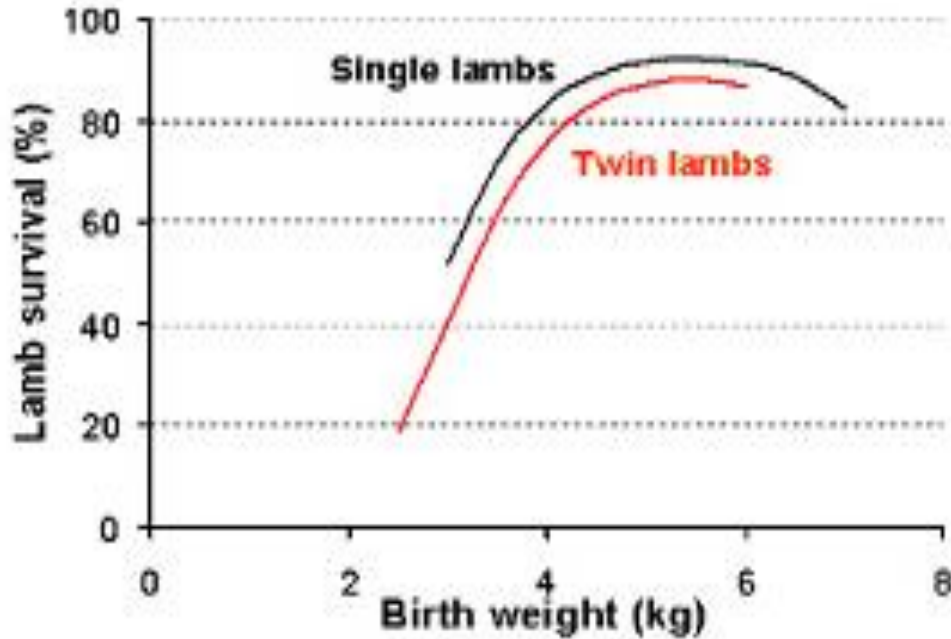


Birthweight & birth type



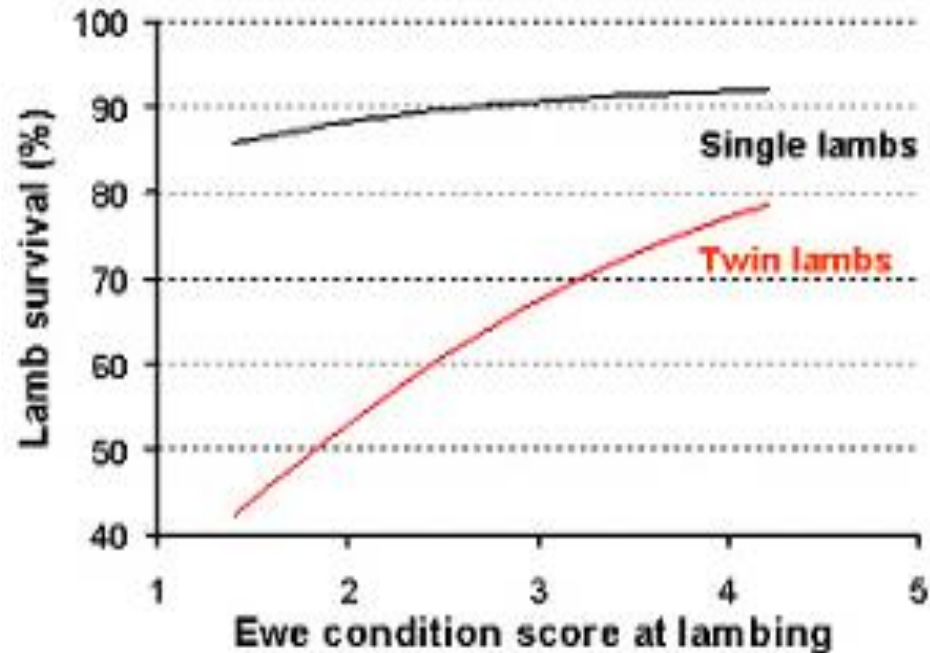
EWE NUTRITION

Lamb birth weight

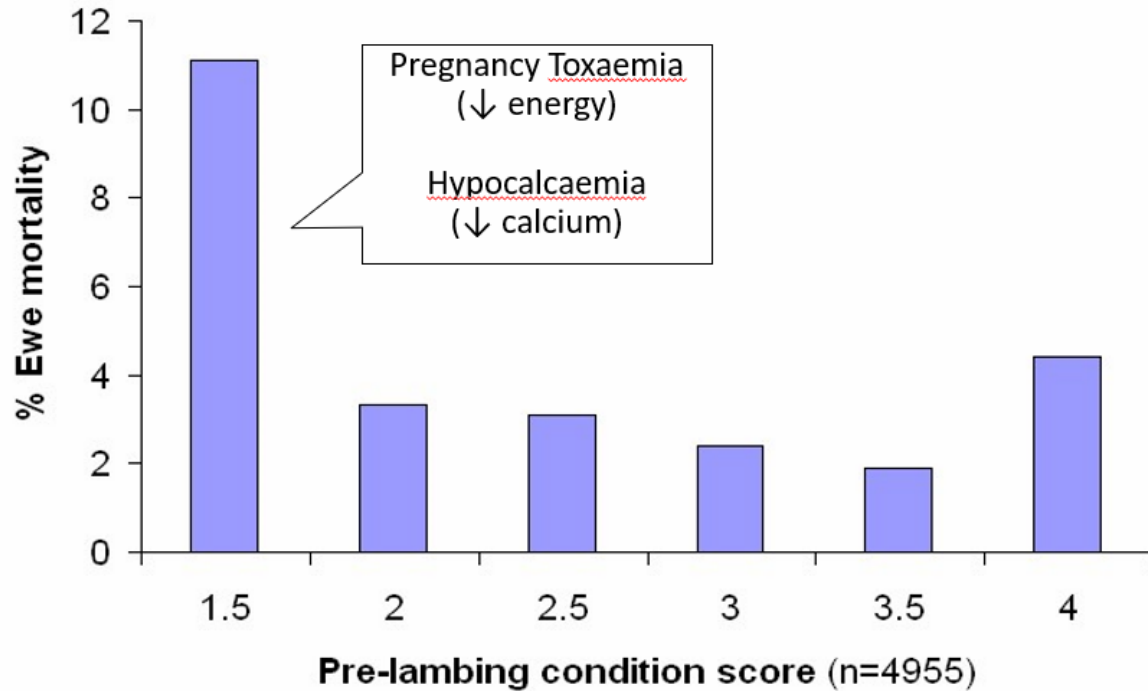


Scanning twins and singles?

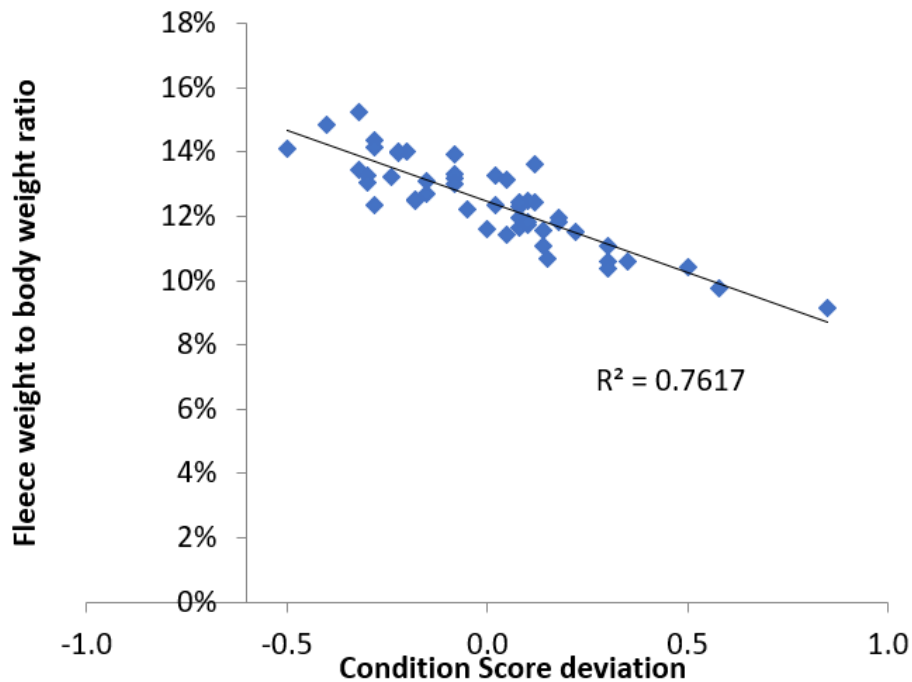
Ewe condition score and lamb survival (Lifetime Wool)



Ewe mortality (Lifetime Wool)



Condition score v clean fleece weight

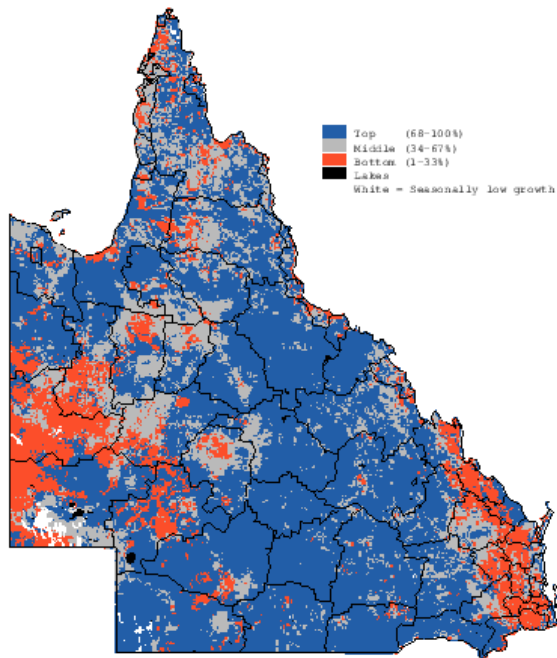


Meeting the needs of pregnant ewes

1. Determine ewe's energy requirements
- 2. Assess pasture for quality & quantity**
3. Calculate surplus/deficit and feed appropriately

Pasture status

Most Likely Tercile for Pasture Growth
January to March 2022



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RAMping Up Repro™



DON'T FORGET THE BOYS!! – Ram Preparation; 5 T's

Quantity



- Feed on Offer (FOO)
- Kg DM/ha

FOO = 1500

(700 green, 800 dead)

- Dry organic matter digestibility (DOMD) = 50%
- Crude protein (CP) = 8.6%
- Metabolisable energy (ME) = 6.9 MJ

Feed test

Neutral Detergent Fibre %	61
Acid Detergent Fibre %	33
Crude Protein %	11
Inorganic Ash %	9
Metabolisable Energy MJ/kg DM	7.8
*Water Soluble Carbohydrate %	<4
Organic Matter %	91
DOMD %	53
Dry Matter %	28

Predicted intake

- 2% of live weight
- 60kg ewe x 2% = 1.2 kg
- 1.2 x 7.8MJ = 9.4 MJ

ME (maintenance) for 60 kg ewe?

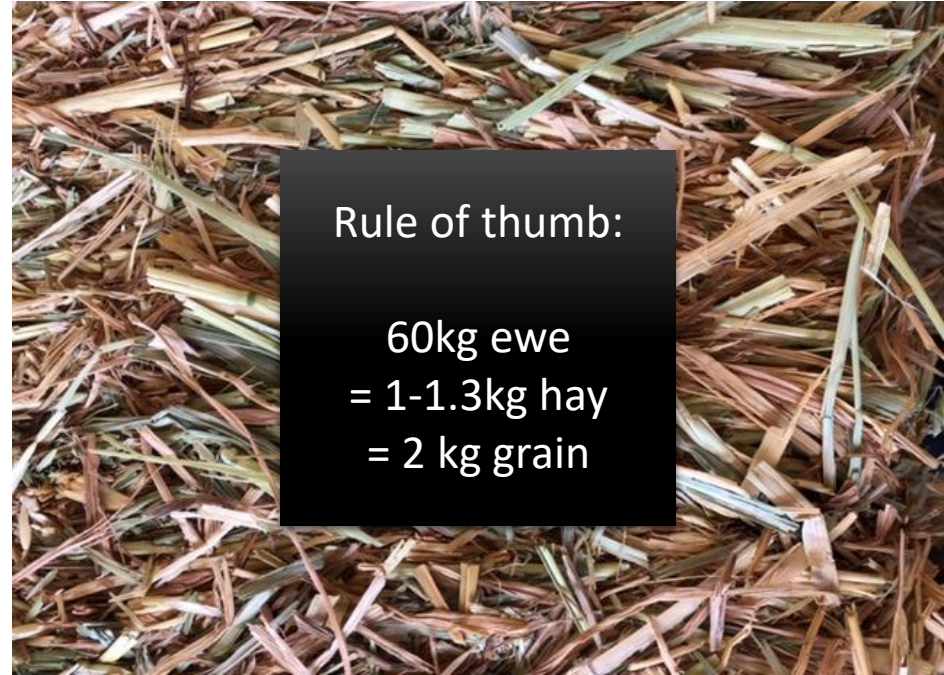
ME(lactation) for 60 kg twin bearing ewe?

How much can they eat?

Higher fibre feed = Lower daily intake

A ewe can eat (roughly, % bodyweight):

- 3.5% body weight – grain
- 2 to 2.4% body weight – hay
- 1.5% body weight – straw/dead grass



Meeting the needs of pregnant ewes

1. Determine ewe's energy requirements
2. Assess pasture for quality & quantity
- 3. Calculate surplus/deficit and manage appropriately**

Table 5. Change in Condition Score due to ME Surplus or Deficit

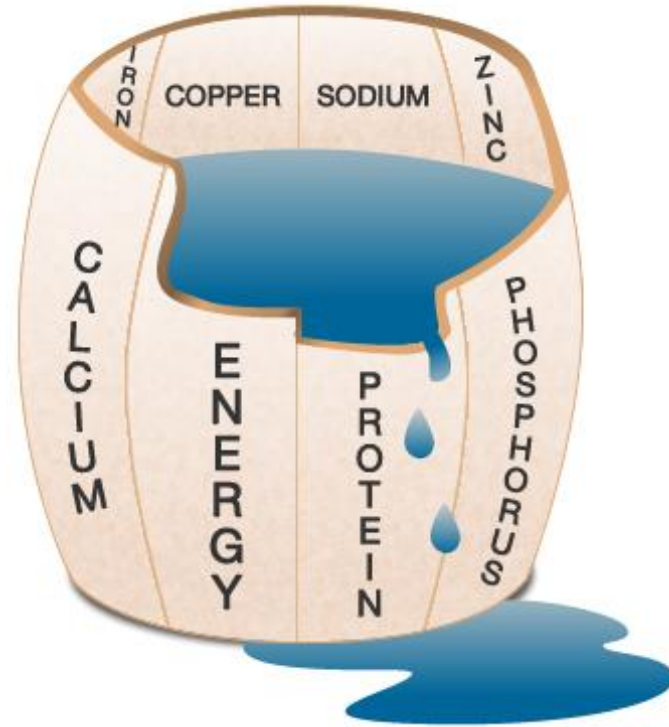
Increasing Condition Score ME Surplus (above maintenance)					Decreasing Condition Score ME Deficit (below maintenance)				
ME surplus	CS gain per month	Gain g/day			ME Deficit	CS loss per month	Loss g/day		
		50kg	60kg	70kg			50kg	60kg	70kg
6.0	0.4	91	124	131	-3.00	0.4	92	107	133
6.5	0.4	99	134	142	-3.25	0.4	100	116	143
7.0	0.4	107	145	153	-3.50	0.4	108	125	154
7.5	0.4	114	155	164	-3.75	0.4	115	134	165
8.0	0.5	122	165	175	-4.00	0.5	123	142	176
8.5	0.5	129	176	186	-4.25	0.5	130	151	187
9.0	0.5	137	186	197	-4.50	0.5	138	160	198

It takes twice as much energy to gain weight than lose it

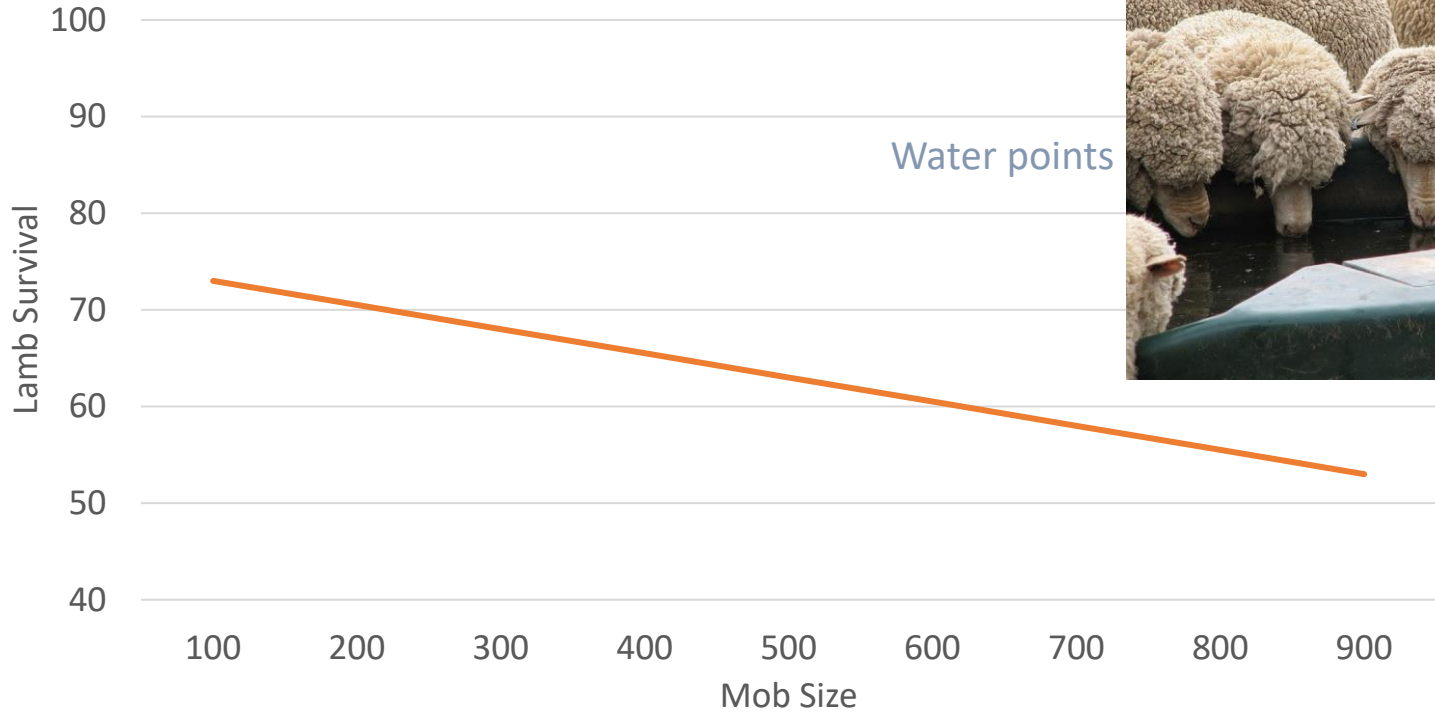
Mineral supplements

- Phosphorous
- Calcium
- Magnesium
- Sulphur
- Sodium

- Zinc
- Copper
- Selenium
- Manganese
- Iodine
- Cobalt



Mob size and merino twin lamb survival



Weaning

2. Background to the project

- Low liveweights at 9 months of age have been shown to reduce lifetime net reproductive rate (NRR)
- This means decreased reproductive performance over the lifetime of the ewe.

Flock	Ewes ranked on lifetime NRR (lambs weaned/ewes joined)					
	Bottom 25%		Average		Top 25%	
	Lwt (kg)	NRR	Lwt (kg)	NRR	Lwt (kg)	NRR
C-Flock	28.4	1.6	28.8	3.0	30.1	5.6
D-Flock	26.9	1.0	27.4	3.8	28.4	4.8

Source: Lee et al. (2008)



Take home messages

1. Condition score is the key driver of reproductive performance
2. Scanning for multiples improves lamb survival
3. Water access and quality are most important
4. Mob size, particularly in twin bearing ewes impacts lamb survival
5. Time of weaning has a profound effect on nutritional requirements and future reproductive efficiency.



Tools and resources

- MLA Producer Demonstration Site: Managing the growth of ewe weaners - Elders and NSW Western Division LLS.
- [MLA Stocking Rate Calculator](#)
- [MLA Feed Demand Calculator](#)
- [More lambs, more profit publication](#)
- [Making More From Sheep – online training modules](#)
- Picking Performer Ewes – workshop
- Sheep Reproduction Strategic Partnership
- Lifetime Ewe Management – training program
- Bred Well, Fed Well sheep - workshop
- Winning With Weaners - workshop

Links to all workshops and programs can be found in your Forum proceedings



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