



RED MEAT UPDATES

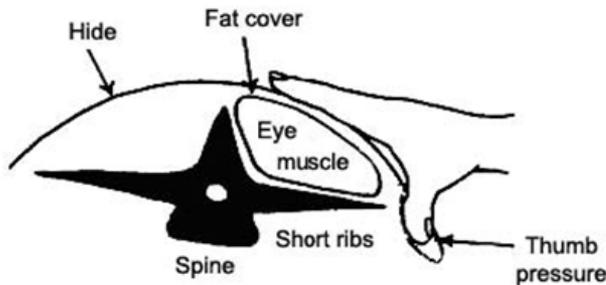
T A S M A N I A

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The cost of overfeeding livestock

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Setting the scene – CS targets



Condition score (CS)



Calving period	Animal class	Ideal condition score			
		Joining	Calving	Mid-lactation	Weaning
Spring	Heifers		3.0	2.5	2.5
	Cows	3.0	2.5		
Autumn	Heifers	3.5	3.5	2.5-3.0	3.0
	Cows	3.5	3.5		

Source: Department for Environment, Food and Rural Affairs and More Beef from Pastures

Increasing cow condition score (CS)

- What does it take to increase the CS of a cow?
 - 1 CS = 10% LWT
 - 1 kg LWG = 42 megajoules (MJ) = 4 kg DM
- Assume a 500 kg cow needs to add 0.5 CS
 - 0.5 CS = 25 kg LWT = 1050 MJ = 100 kg DM
- Adding liveweight is the last partitioning of dietary energy after the maintenance, pregnancy and lactation demands are met.

Opportunity costs

- The larger the cow, the higher the maintenance feed requirement:
 - maintenance (kg DM/head/day) = $LWT/100+1$
 - 500 kg LWT (6 kg DM/head/day)
 - 600 kg LWT (7 kg DM/head/day)
- Consider the stocking rate implications:
 - fewer (but heavier cows) versus more (but lighter cows)
 - annual utilisable pasture of 7 tonnes DM/ha, 100 ha, same stocking rate;
 - 500 kg LWT cow (1.7 cow/calf units/ha) = \$1405/ha
 - 600 kg LWT cow (1.5 cow/calf units/ha) = \$1260/ha

Animal health considerations

Over-conditioned cattle	Under-condition cattle
Milk fever	Inability to cope with difficult weather conditions
Grass tetany	Poor lactation performance
Dystocia	Forced earlier weaning
Reproductive outcomes <ul style="list-style-type: none">- Shorter PPAI period- Higher pregnancy rate	Reproductive outcomes <ul style="list-style-type: none">- Longer PPAI period- Lower pregnancy rate

Capitalising on cow condition (efficiency)

- Mobilising body condition is 80% efficient relative to the energy used to create it.
 - Silage and hay are often 70% efficient relative to the energy at the time of harvest (harvest, storage and feed out losses)
- If fresh pasture costs \$0.06* kg/DM then remobilising body condition to supplement the diet would cost \$0.08 kg/DM, therefore:
 - in: +1 kg LWG = \$0.24
 - out: -1 kg LWG = \$0.30

*Based on Holmes and Sackett AgInsights Vol. 2018

Capitalising on cow condition (efficiency)

- Consider a 600 kg dry cow with 0.5 CS available to remobilise:
 - 30 kg LW = 1008 MJ = 96 kg DM
 - 0.5 CS could supplement being underfed by -2 kg DM/head/day for 48 days.
- The economics of supplementing the diet are shown below:

Feed source	Unit cost (\$ kg/DM)	Daily cost (\$/cow/day)	48 day cost (\$/cow)
Fresh pasture	0.06	0.12	5.76
Body condition	0.08	0.16	7.20
Nitrogen-grown pasture	0.15	0.30	14.40
Silage (as fed)	0.50	1.00	48.00

Top four take home messages

1. Learn how to condition score your cows and know the CS targets during the cow's reproductive cycle.
2. Use a feed budget to calculate the feeding regime for COWS.
3. Assess cow condition throughout the breeding cycle.
4. If necessary (and/or appropriate) start early to either build up CS or burn off CS.

Tools, resources and training

- Condition scoring beef cattle:
- <http://mbfp.mla.com.au/Weaner-throughput/Tool-52-Condition-scoring-beef-cattle>

- Gross margin analysis tools:
- http://dpiwwe.tas.gov.au/Documents/Livestock%20GMs_High%20Rainfall.xlsx
- http://dpiwwe.tas.gov.au/Documents/Livestock%20GMs_Low%20Rainfall.xlsx

- Pasture Principles – Macquarie Franklin



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