THE UNIVERSITY OF MELBOURNE

Melbourne Veterinary School

6.4 Nutrition

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Revision

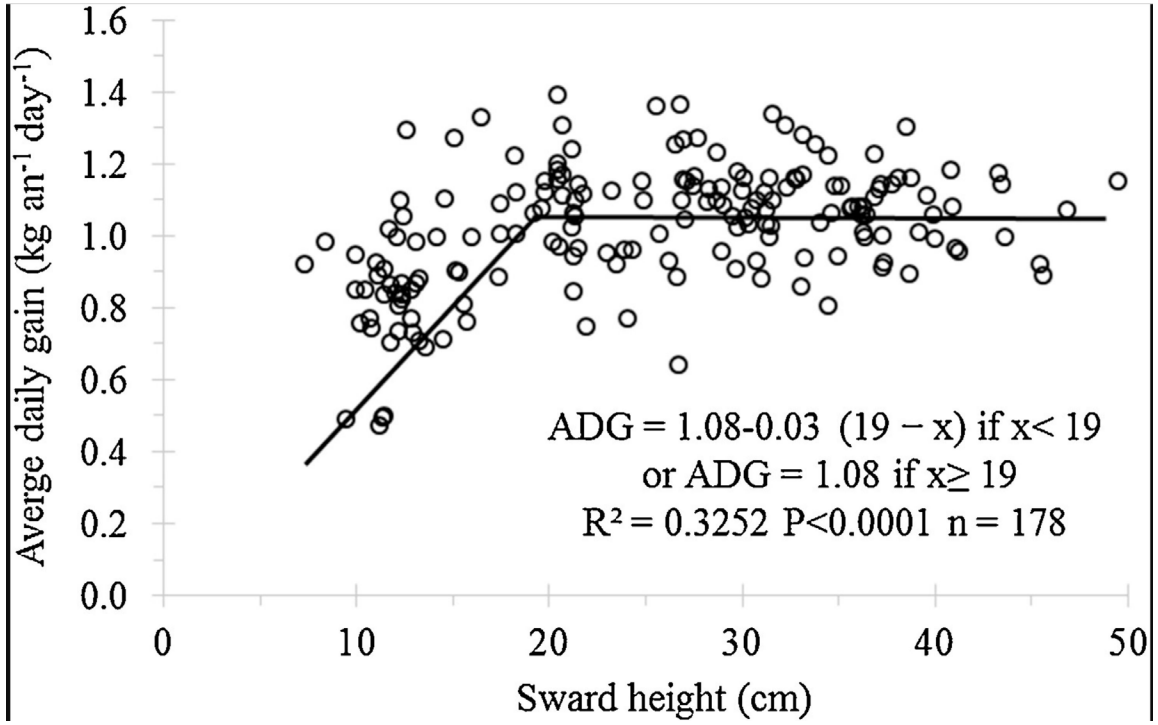
- We have already covered basic animal nutrition – revise this again if you have forgotten!
- Huge variation in the types of pastures that beef cattle graze around the world

Beef cattle grazing

- Various methods of stocking farms
  - Set stocking
  - Rotational grazing (big variations in how this is done)
- In general rotational grazing based on plant physiology should increase overall pasture production for the year and also quality
- Rotational grazing has increased labour requirement per hectare
- Rotational grazing reduces uneven grazing pressure and may improve animal response due to increase higher quality pasture

Beef grazing

- Pasture height
  - Important determinant of available feed on offer (FOO)
  - Growth rate impacted by pasture available (and quality) – see example on right
  - ADG increases over relatively low pasture height until meets a point where steers meet maximal growth
  - Might change line of slope by pasture quality



Beef maintenance

- If stock grazing high quality pasture
- Useful markers to remember

Maintenance requirement

Type of stock	kdDM/ha required	Pasture height (cm)
Dry cow	1000	3
Pregnant cow in last three months	1200	4
Lactating cow	2000	9

Problems with pastures

- Range of dietary problems can occur
- Bloat
  - Grazing high quality pasture with legume > frothy bloat
- Nitrate poisoning
  - Certain times of year some plants have high nitrate e.g. capeweed
- Toxicity
  - Thousands of plants/weeds that can cause disease, stock can recognise some as being dangerous. Can be caused by pruned garden plants during drought.

Beef cattle condition score

- Optimal CS to maintain cattle at various times of the year
- Want animals in optimal score – not too heavy or light
- Ideally keep between 2.5 and 3.5
- Depends on time of year and likely levels of feed in future e.g. start of Spring OK to be at lower end
- CS is important determinant of when a beef cow will cycle after giving birth = longer time if lower CS
- This is a greater challenge for autumn calving, needs supplementary feed (spring calving has increasing pasture)

Supplementary feed

- Need at least 30% roughage in diet (more than what is needed for sheep) – reduces acidosis
- Types of supplements already covered under general heading: grains, hay, silage, straw and other
- Standing feed over summer may also be included in supplementary feed
- Takes 3-4 weeks to allow rumen gut microbes to get used to new feed types
- Particularly important when changing to high starch diet e.g. grain

Day	Amount of hay	Cereal grain (kg/hd/day) for cattle
1–2	To requirements, then grain	1
3–4	Decrease hay fed	1.5
Day 5 onwards	Decrease hay fed	Increase by 500 g/day – until required feeding level is reached

https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0015/103506/full-hand-feeding-of-beef-cattle-management.pdf

When are supplements needed…or not

- Supplements might be needed any time through the year (varying with environment)
- Generally associated with low/no production and/or drought
- Interaction between condition score/pasture growth rate and pasture availability
- Need to consider stocking rate, stock sales, agistment, lease etc
- Need to plan multiple weeks/months in advance
- Decision to stop supplements based on budgeting amount of pasture availability