

Underweight cow

History:
 Age, stage of lactation, proximity to calving?
 Is this a herd or individual problem?
 Are there any recent changes in management or nutrition?
 Blood sample - β -Hydroxybutyrate >1.2 mmol/L indicates subclinical [ketosis](#) and active fat metabolism

Weight loss

Failure to gain

Poor rumen fill

Good rumen fill

Mineral deficiency

Is there chronic disease?

Ration analysis

Can't eat

Won't eat – primary disease - causing reduced feed intake

Malutilization

Malabsorption

Maldigestion

1. [Copper](#)
2. [Selenium](#)
3. [Cobalt](#)
4. [Iodine](#)

1. [BVD](#) – persistent infection
2. [Chronic pneumonia](#)
3. [Congenital heart disease](#)
4. [Parasitic gastroenteritis](#)
5. [Coccidiosis](#)

1. Dry Matter - typically 30-40%
2. Energy - typically 200-300 MJ Metabolizable Energy/day
3. Protein (Crude Protein - target 15-17%)
4. Rumen degradable protein - typically 70-80% of CP
5. Rumen undegradable protein - typically 20-30% of CP
6. Fiber - measure of digestibility
7. Fat (oils) - Target $<5\%$

Unpalatable feed

Social

Physical

Infectious

Non-infectious

Liver disease

Small intestinal disease

Rumen dysfunction

Traumatic reticulitis

Feed should be fresh (replaced twice daily). Leftover feed should be removed daily. Spoiled feed should not be fed. Diets high in unpalatable anionic salts shouldn't be fed

[Lack of feed, feedspace or bullying](#)

For example [Pneumonia](#), [Mastitis](#), [Metritis](#), [Peritonitis](#)

Lameness

Physical blockage

For example [Fluke](#), [Ketosis](#) and [Fatty Liver](#), [Hepatitis](#), [Subclinical copper toxicity](#)

Diagnosis: Often present with diarrhoea, reduced milk yield and fat. Ruminocentesis - pH <6.0 . Treatment: Don't feed more than 4kg concentrate in one go, ensure adequate dietary fiber

Diagnosis: [Withers pinch test](#), [bar test](#), [Eric William's test](#), [cardiac ultrasound](#). Treatment: Place a magnet, often euthanasia

1. Teeth problems
2. Mandibular fractures

1. Lumpy jaw
2. Wooden tongue

For example [Left displaced abomasum](#), [Right displaced abomasum](#), [Intussusception](#), [Caecal dilation +/- volvulus](#), [Impaction](#)

Surgical correction

Clinical Johne's

Coccidiosis

Parasitic gastroenteritis

Enteritis
 1. [Salmonellosis](#)
 2. [Winter dysentery](#)

Diagnosis: faecal PCR or culture
 Treatment: cull on humane grounds

Diagnosis: Faecal egg counts and speciation
 Treatment: ionophores

Diagnosis: Faecal egg counts
 Treatment: class I, II or III anthelmintic. There is less reported anthelmintic resistance in cattle than sheep (Sutherland and Leathwick 2011)

Dairy cows should always have feed available, target 75-80cm/cow (Cooper 2017). Reduce bullying by having enough feedspace, several escape routes, 95% cubicle occupancy, minimise group changes

Systemic antimicrobials or potassium iodide (off license) and NSAIDs. Consider euthanasia if unable to prehend food

References

- LeBlanc S (2010) **Monitoring Metabolic Health of Dairy Cattle in the Transition Period Introduction- Metabolic Challenges in Peripartum Dairy Cows and Their Associations with Reproduction.** *J Repro Develop* 56. Website: www.jstage.jst.go.jp (pdf download).
- Sutherland I A & Leathwick D M (2010) **Anthelmintic resistance in nematode parasites of cattle: a global issue?** *Trends Parasitol* 27 (4), 176-181 [PubMed](#).
- Cooper R (2009) **Nutrition of Dairy Herds Part 1 - Maximising Dry Matter Intake.** In: *NADIS Animal Health Skills*. Website: www.nadis.org.uk.