

ADVANCE

cattle health scheme

The Downer Cow Syndrome



- ◆ Hypocalcaemia, coliform mastitis, obstetrical paralysis, fat cow syndrome, physical injury and peritonitis can all lead to peri parturient recumbency. Ischaemic necrosis of the large pelvic limb muscles leads to prolonged recumbency.
- ◆ Peri parturient acute hypocalcaemia is the most common exciting cause and there are a number of contributing factors outlined below which can be guarded against—consult your veterinary surgeon and nutritional advisor for full details:

a) Hypomagnesaemia blocks PTH secretion and therefore the cow's ability to mobilise calcium from bones and diet. **Sample several cows within 24 hours post calving to check magnesium and calcium.**

b) High dietary/ serum phosphorus. **Ensure cows receive 35 g phosphorus or less daily.** More typically phosphorus levels fall in acute hypocalcaemia due to PTH action. In a minority of cows, phosphorus levels remain low after resolution of the hypocalcaemia and these cows stay down.

c) Metabolic alkalosis due to a dietary cation/anion imbalance predisposes cows to acute hypocalcaemia. **Check urine pH in last 2 weeks of gestation. Optimum control of hypocalcaemia if urine pH = <8.2**

Mid-lactation acute hypocalcaemia may result from a sudden decrease in dietary calcium (or the availability of dietary calcium), or inadequate dietary magnesium.

Will She Get Up? - Guide to Sampling a Downer Cow

- ◆ Blood samples should be taken for a Downer Cow profile on two occasions 48 - 72 hours apart.
- ◆ Samples are analysed for calcium, magnesium, phosphorus, CK, AST (muscle damage), urea (renal function) and β - HB (ketosis).

Days Recumbent	CK critical level (i/u/l @ 37 °C)
0.5	19000
1	29000
2	25500
3	22000
4	17000
5	13250
6	9600
7	6000

Critical levels of CK activity above which there is <5% probability of recovery.

Urea levels >25 mmol/l also carry a poor prognosis.

Samples Required

Serum (clotted blood)



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