



DEFICIENCIES

There are 4 different minerals that cattle can become deficient in, and around stressful changes in management deficiencies can often occur despite adequate amounts being provided in feed!

CALCIUM/MILK FEVER: The most common deficiency, seen mainly in older or high yielding animals within the first few days of calving. This causes muscle weakness and slowing of all internal functions so your typical downer cow; dis-interested in things, cold drooped ears, low rectal temperature and not passing faeces. If caught before they are down, calcium maybe administered under the skin or into the vein. If however the cow is unable to rise and you are sure it is milk fever, administer calcium into the vein, or call the vet, the earlier we are presented with down animals the greater the chance of recovery. **If calcium is given underskin and the cow is not up within 2 hours, SHE WILL NEED CALCIUM INTO THE VEIN.** The longer a cow is down the less likely she will ever get up due to pressure damage to the legs – this becomes a problem after 3 hours and a serious problem after 6 hours.

MAGNESIUM/ GRASS STAGGERS: Almost always adult animals, the only exception being calves on a pure milk diet. Magnesium is strongly associated with the nervous system so deficiency causes nervous signs such as trembling, diarrhoea, wild eyes, aggression/excessive reactions! These animals will generally not be interacting with the rest of the herd and become increasingly wobbly on their feet before going down. Once down they maybe still wild about the head/eye, may begin to fit, and have a normal to high temperature. **If you suspect magnesium deficiency call the vet immediately**, whilst awaiting the vet, if already down you can give 1 bottle of magnesium **UNDERSKIN ONLY**, the vet may administer more if required once the animal is examined. Leave the animal alone then until the vet arrives as stimulating it i.e. trying to get it up or approaching it can bring on fitting episodes which is when the cow is most likely to die!

PHOSPHOROUS: Less well known, phosphorous deficiency is commonly seen alongside calcium deficiency and is often the reason calcium deficient animals improve to a point but fail to regain their feet. Phosphorous is administered by intramuscular or intravenous injection, oral supplements are also available.

THIAMINE: This is also known as vitamin B1, deficiency can occur from week old calves to adult animals, thiamine is involved in the fat that coats and insulates the brain cells, if deficiency occurs the brain cells begin to emulsify and effectively 'short circuit', so these animals will stop interacting with herd, may appear depressed and show a range of neurological signs such as head tilts, blindness, circling or inability to stand. As the other most likely cause of this type of behaviour is meningitis a vet should be called immediately to any animal showing these signs. Thiamine is found in high levels in forage, concentrates and milk, deficiency occurs not because of diet but because a stress factor such as turnout or diet change causes an individual animal to have reduced thiamine availability despite adequate intake. Therefore treatment must be by intramuscular or intravenous injection of thiamine, in some cases a steroid may be needed to reduce swelling in the brain, and other treatments may be needed to help return of appetite.



Classic 'swan neck' seen with milk fever



'Wild eye' and out-stretched neck often seen with staggers, this cow though down maybe aggressive or begin fitting if stimulated.

COCCIDIOSIS; A COMMON CAUSE OF BLOOD SCOUR AND MORTALITY FROM 3 WEEKS OLD

Coccidiosis is a protozoan parasite that can infect cattle of all ages; after infection cattle develop strong immunity but some animals continue to shed oocysts (the infectious stage), especially at calving, these are carriers and are important in maintaining infection over the generations. Note: coccidia immunity is specific to the strain exposed to, therefore bought in animals can both introduce new risk to the rest of herd, or be at risk themselves.

Why does it matter? Coccidiosis infection is one of the top causes of poor performance in calves, and can be fatal. When its three week life cycle completes in the young calf it causes SEVERE intestinal damage, greatly

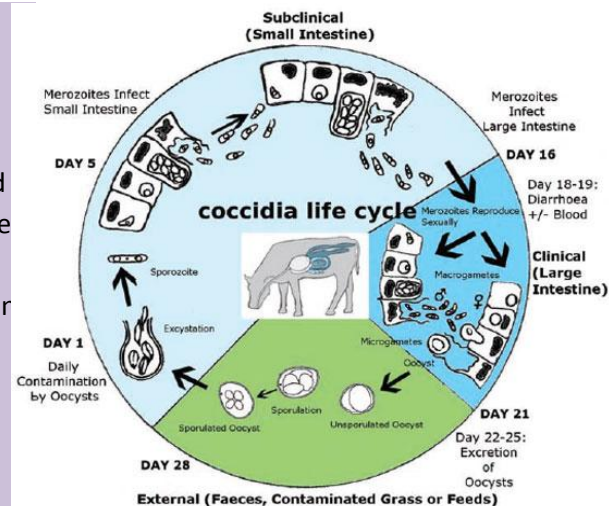
reducing the guts ability to absorb nutrients and causing blood loss at the same time. This damage may never be fully repaired and often poor growth rates result. The infected scouring calf will be highly infectious shedding millions of oocysts and contaminating the calving environment for the following calves; ingestion of 1 single oocyst can cause infection.

Signs; Watery diarrhoea, straining, depression, poor appetite, blood/ black sticky residue around bum, very young calves may die before clear signs seen.

Treatment; Baycox or Vecoxan oral drench, severe cases may benefit from an anti-inflammatory such as metacam and electrolytes (fluid therapy), dehydrated sick calves find it hard to keep warm and often will recover better if kept warm with calf jackets/piled in deep straw/under heat lamp.

Prevention; Coccidia oocysts are thick shelled and resist all standard disinfectants

- 1) Avoid high stocking density & if outdoors regularly move feed and water troughs
- 2) Preventing faecal contamination of feed and water troughs, by raising or covering
- 3) Increasing the bedding to reduce contamination
- 4) Avoid mixing different ages of calves
- 5) Clean and disinfect all buildings between groups of calves **with a coccidial appropriate disinfectant (farm vets can advise)**
- 6) **In herds calving year round or with a yearly high risk period prevention using an in feed coccidiostat may be required**



Uterine/Calf-bed prolapses – CALL THE VET IMMEDIATELY

1. **Restraint** – The greatest risk to success is trauma to the uterus, therefore minimising movement is essential so the cow does not bash or stand on it. Initially the uterus will not be too swollen; however, if the cow is standing the uterus will quickly swells and become weak. For this reason if the cow is down, keep her down and ensure she does not sit on the calf bed. If the cow is standing, restrain her, somewhere away from muck or bedding and leave alone, if she lies down try to move the uterus GENTLY AWAY from her so she is not lying on top of it and wrap in a clean sheet to reduce contamination.
2. **Why?** Prolapsed calf beds happen for a variety of reasons, the most common being milk fever (maybe sub-clinical) or trauma during calving. If you suspect the cow has milk fever you can give 1 bottle of red or green top calciject underskin whilst you wait.
3. **What the vet will need ready** – 1 Large bucket of warm water, 1 clean large sheet/tarpaulin (used to keep clean and lift the uterus, cloth will grip better than plastic making lifting easier), decent lighting, ideally extra help, and restraint e.g. a halter.

***In bad cases, it can be extremely helpful if you have a way to lift the hind end of the cow using a tractor e.g. a strap/ropes/hip hoist and 1 bag of white sugar.**



If she is lying down, keep her down! Wrap uterus in a clean sheet to keep it clean whilst waiting for the vet.



To replace when lying down, cow needs to have both legs drawn behind and lying on flat surface or pointing downhill not up!

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