

## TRANSITION COWS - Do You Remember Them ?

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Over the past 12 months in particular, price has been not only a major consideration - but often *the* major consideration when making feed choices for many herds. Input costs have been slashed to a bare minimum in many operations, but do you remember the importance of your transition cow ?

From 4 weeks before calving to 4 weeks after, the transition period represents the highest level of stress a cow's immune system will be put under. The udder places a large drain on the immune system, increasing the risk of metabolic and other disease, particularly in the first month of lactation. Change in nutrition, stress and reproduction are also examples of generalised events that can have a dramatic impact on the immune system. Like us, cows can get run down and will be more likely to suffer from a host of disease as a result - many preventable by good transition cow management.

- An average of 6% of cows suffer from clinical Milk Fever.
- An average 25% of heifers and 50% of second lactation cows will suffer from sub-clinical Milk Fever.
- Age increases risk of milk fever by 9% every lactation.

A cow with any form of milk fever is 8 times more likely to develop mastitis, as the lack of calcium in the blood affects the teat canal's ability to close off properly, protecting the udder from environmental bacteria. Research has shown that between breeds, Jerseys are 30% more likely to suffer from Milk Fever than all other breeds, who do not seem to differ greatly from each other. Within a breed, scientists have identified markers that indicate calcium metabolism, but these do not differ greatly. It is still the management of the cow that creates variance in the activation of these markers to metabolise calcium.



### So, What Can We Do About It ?

*DCAD - only part of the story:* Mineral balance is very important, to ensure correct balance of Calcium, Magnesium, Phosphorus ratios & levels. Magnesium is very important - often under estimated, as low Mg levels will reduce a cow's ability to maintain her blood Calcium levels.

*DCAD - When to start:* Management of your dry cow, to ensure her diet allows a natural drop in urine pH less than pH 8 before entering the springing group is absolutely vital, otherwise the effectiveness of your whole lead feeding program will be greatly decreased.

*DCAD - How to measure:* A dietary cation-anion difference is the measure of different minerals in the diet.  $(Na + K) - (Cl + 0.6 S)$  has been shown to be the most reliable equation for calculating the DCAD of a diet, to predict the blood pH and reduce Milk Fever. Lowering the DCAD of your herd's diet from +300 to 0 Meq reduces Dry Matter Intake by over 11%. Urine pH will be lowered from 8 to 7 on this diet, it will reduce the incidence of Milk Fever by 13%, to less than 3%. To drop the pH of a cow's urine to under 6.5 would require a DCAD for their total diet of -150 Meq. This action would reduce milk fever incidence to under 1%, but requires an extreme acidification for only a modest benefit.

*What else can be done :* Environment can increase risk of Milk Fever, large temperature variation from day to night, low minimum grass temperature, high rainfall and high evaporation rates will all increase a cow's risk of suffering from milk fever. Farmers can identify days of high risk to better manage their Milk Fever risk. While they have a higher risk of other metabolic diseases, induced cows actually have a lower risk of Milk Fever.

For high production cows in particular, a modified lead feed program using vitamin D3 supplementation in the 7 days before calving only, can be very effective in helping manage a transition cow to prevent both milk fever, as well as early lactation metabolic disease. It requires additional labour and management of springing cows, but can be well worth the effort.