



Transition Cow Part 2

Last month we covered the 9 main metabolic diseases associated with calving, and as stated, we will look at a good transition management program this month.

The last 100 days of lactation are the foundation of next lactation. Certainly we are still looking to optimise milk production, or milk over feed cost (MOFC), but dry off body condition score (BCS) must figure prominently in the equation. In a late lactation ration which is well balanced for energy, protein and fibre, and available to the cow in line with her capacity to eat, both optimum milk and dry off BCS will both be met. BCS of 5 is our goal, remembering 1 BCS is worth 1000 to 1500 lts next lactation, any higher score will cause calving problems. Certainly this season has presented some problems in doing this. (Feb article)

Assuming we have dried the cow off 6 to 8 weeks prior to calving the next issue is to maintain a constant weight; neither gaining nor losing weight. Either can precipitate the issues highlighted last month. A ration to hold weight steady will depend on feed available, but must contain at least 50% hay to encourage rumen regeneration even if pasture is available. If it's solely pasture hay (home grown) some grain (1 kg) will be necessary to provide enough energy for maintenance and pregnancy, and if the hay is all cereal hay this year, the energy situation will be worse.

The actual transition period is usually defined as 21 days prior to calving to 40+ days post calving – the high risk period. My favourite ration for the 21 days prior to calving (lead feeding) is oaten hay adlib (10 kgs/cow/day), and 3 kgs of a good lead feed grain mix; oaten hay, because of palatability (intake), rumen 'friendly' (very 'neutral') and good for stimulating rumen regeneration (fibre). This will have to be replaced for many this season with straw, and will need more grain to supply energy.

A good lead feed grain mix will contain 80% wheat or barley, 15% canola meal and half rate of additives normally in the milking grain mix, and anionic salts to produce the negative DCAD. The anionic salts need a DCAD of around -2000 meq to be confident of their effectiveness. With oaten hay being unaffordable, let alone available this year, we need to be mindful if pasture hay is being used it is far higher in potassium and possibly will require further anionic salts to support sufficient DCAD to avoid milk fever.

My own clients all use monosin/tylosin (Rumensin/Tylan – rumen modifiers) plus trace element premix and have 50% rate in the lead feed to both prepare the rumen for their full inclusion in the dairy grain mix, but also for their benefit to the springing cow. Half rates of macro elements of lime and MagOx (no salt, it is a positive cation which reduces DCAD) also assist the springing cow in her need for these elements pre-calving, but also avoid feed rejection post-calving.

The starch from cereal grain will stimulate extension of rumen papillae, the main absorption sites for nutrient to the cow. Also starch digesting bacteria in the rumen decline in number over the dry period, and need to multiply in number ready for digesting grain in a milker ration. This reduces the risk of acidosis post-calving.

Canola meal, apart from being an excellent source of high quality protein, stimulates appetite at a time when the cow (just prior to calving) has a declining desire to eat. The springer cow has, due to declining appetite, a greater need for higher density of energy and protein in the ration to sustain maintenance of herself and the calf. Neglecting to provide sufficient energy at this time will set off mobilisation of body fat (negative energy balance), a major precursor for calving difficulties firstly, but more importantly, ketosis and fatty liver syndrome.

Lime and MagOx provide calcium and magnesium, which work in unison in regard to absorption into the cow's blood stream. Limit either and you limit absorption of the other. Need for, especially, calcium at this time is obvious, but regularly not supplied.

Post-calving dry matter intake is the next challenge. A dry cow eats around 12 kgs dry matter, she will need to eat 21+ kgs after calving to meet energy/protein required for her genetic potential for milk production. The problem lays in the fact she will try to produce to potential whether she has 21+ kgs DM feed or not, with disastrous consequences. This level of intake will not be difficult to provide if pasture is abundantly available plus her grain ration (5kgs), and 1 – 2 kgs of hay for fibre.

Below optimum intake we expose her to displaced abomasum from empty rumen and calcium shortage, ketosis and fatty liver syndrome from low energy induced fat mobilisation, and nutritionally stress induced mastitis and metritis.

Good transition management always involves good observation of cows – the dairyman's art. Firstly, the physical appearance and behaviour of your cows; lethargic cows indicate nutritional imbalance, and excessive aggressiveness underfeeding. Manure tells all on rumen function and efficiency. Daily litres indicate feed available, butter fat percent – ration fibre, and milk protein - energy/protein of ration. BMCC, if not from clinical cases, indicates stress or acidosis induced immune function decline.

Finally, when we are going for peak milk production around 80 days, we are also trying to get her back in calf; a pretty tall order that requires all systems working well. A reminder also, if cows are going down with clinical disease around calving, you can be sure we have a large number of cows still walking but severely handicapped with sub-clinical disease – the ration must be looked at.