



Lactation Potential and Fertility

August and into September each year are regularly periods of feed shortage. The impact is severe in terms of both milk production and fertility.

The season to date has been very conducive to higher productivity with many herds milking in excess of last year's production at this time. Potential for substantial improvement in farm profit exists at present if production momentum can be sustained.

Rations at this time of the year are usually quite well balanced but there is simply not enough available to meet cow's intake capacity based on fibre. Fibre is the most limiting factor to intake. The perfect ration has an energy level of 11.5MJME, an NDF (fibre) of 32% and crude protein at 18%. At these specifications a 550kg cow can eat 20kgs of dry matter a day and should produce 28 litres/day, assuming she calved without difficulties, had a good transition feed program and was in BCS of 5 at calving.

Due to pasture growth rates declining over July, insufficient pasture is available through August to mid September. As a result, unless cows are supplemented with additional feed, milk production will decline with a consequence of lowered peak milk and reduced total lactation potential. Many herds in SW Victoria and Lower SE of SA are at 80 to 100 days into lactation, the time at which peak production occurs and sets the maximum possible lactation curve.

Fertility is the second problem due to insufficient dry matter intake. Although the energy per kg of DM is good at 11.5MJME, however, due to not enough dry matter intake the cow's total energy intake is not sufficient to meet her needs for milk production. The problem is further increased by the fact that the cows we milk today have been selectively bred for milk production at the expense of body maintenance. If we do not supply enough feed each day she will, due to her genetic potential for milk production, sacrifice herself in an attempt to meet this energy need to produce at her potential. The result is severe negative energy balance. Simply, she is stripping body condition to meet her energy need. This is acceptable to a point, but in excess will cause the reproduction system to shut down or reduce her capacity to conceive or hold a pregnancy.

It is often difficult to notice excessive body weight losses when you are handling cows daily. The excessive loss is subtle and easily excused as normal weight loss in early lactation. The sign you can monitor is your milk protein test. Check your milk tanker slips daily for signs of

milk protein test drops. A Holstein herd should have a minimum milk protein test of 3.25% to maintain good fertility and cow health. Any test below this is an alarm bell ringing. Your cows are too far into negative energy balance and there will be a consequence in health and fertility.

We provide a ration analysis service to monitor dry matter intake as well as energy, fibre and protein levels of any given ration. We will highlight all limiting factors in that ration and make suggestions to address these issues. You can phone us and we will fax a farm data sheet which on completion you fax back to us for processing and we will report back to you. Any attempt to address this issue will be a sound investment in the profitability of your dairy business due to its pivotal influence on total lactation performance. Growing more pasture is your first measure to meet feed requirement. A sound nitrogen application program will increase dry matter grown at the lowest possible cost. I recommend you contact your fertilizer supplier to advise you on this matter. You can also visit www.nitrogen.landfood.unimelb.edu.au for excellent advice on nitrogen use.

There are feeds available to fill these feed shortages. They can be bought in and used to meet intake deficiencies and be very profitable especially in early lactation. My first recommendation is grain. The losses in grain feeding are almost negligible and require no extra work assuming you already feed grain in the dairy. Medic hay has to be the next choice. Losses of up to 20% of hay fed out are difficult to see, when you can see residue hay after cows have finished eating, your losses are quite high. This can add 30% plus to the cost of the hay and the additional cost of feeding out make it an expensive choice over grain. However, it is low in fibre compared to most forage available, enabling good dry matter intake with high protein and energy levels. When buying forages insist on a FeedTest and aim for 40% Neutral Detergent Fibre (NDF). As NDF increases there is a corresponding fall in digestibility, energy, protein and the cow's capacity to eat it.

Peak milk production is critical as it determines total lactation potential, and a fully fed cow in early lactation will be far less likely to have fertility problems. Based on the information you supply to us we can determine the degree of feed shortage and make suggestions to address matter.