



Early Dry Off

This question comes up every year. Do we dry off cows early that are not milking well? And, what is the benchmark for economic milk production? The answer I give to the first question, like any consultant worth his salt, is to answer with another question! Why is she low in milk production, or another equally ambiguous advisor's answer; that depends.

Seriously, the answer to this first question is a very clear, NO! My reasons are simple. Early dry off is actually an extended dry period which is categorically detrimental to the health and financial viability of the cow. Extended dry period is anything beyond 65 – 70 days. Extended dry periods have negative effects on both milk yield and solids tests. So, due to early dry off the cow will have reduced economic contribution to the herd in both lactations either side of a long dry spell.

Somatic cell counts, particularly in Jerseys, are increased with dry periods greater than 60 days. Long dry periods are also associated with lower fertility next lactation, and this often is the cause for the need for early dry off. Higher culling rates are the norm for cows with extended dry periods due both to reduced income capacity from lower production and fertility. Hence my question; Why is she low in production?

If drought induced feed shortage has reduced milk production momentum in early lactation, there are other issues to consider apart from the above. Managing body condition during long dry spells, particularly in view of most cows dried off early are transported to an out-block and, depending on the time of year, they either become obese or very poor conditioned cows. Either condition will present a major challenge at calving. It is very difficult to achieve ideal dry matter intakes during lead feeding (21 days prior to calving) with either fat or skinny cows leaving them deficient not just in energy and protein, but essential build up of minerals, both macro and trace, so important to both dam and calf at that time. Dystocia (long or difficult calving) is often a product of these conditions

You can expect the traditional post-calving metabolic disorders of milk fever, ketosis, metritis and mastitis. Probably the reasons from last calving that she's a candidate for early dry off this year. From this point we really need to discover why she is so low in milk production, because, essentially she's on the cull list until proven otherwise. The great temptation is to keep her 'because she's only four months off calving', and she's a favourite; and in terrific condition too – about 1 BCS over good calving score!

The bottom line is, there's a reason she's low in production; genetics (which shouldn't happen as this should have kept her from ever getting into the herd), days open, sickness/injury during lactation, or cell count, all of which are sound culling grounds.

To answer the question for those who'll ignore the above; it's about 8 litres. Based on November figures, feed cost of 5 kgs of grain and pasture is \$5.10/cow/day. Feed cost saving from drying is 5 kgs grain @ 45c/kg = \$2.25 + 3 kgs pasture @ 25c/kg = 75c. Total feed cost saving is \$3/cow/day. 8 litres at 38c/lt = \$3.04. Obviously this figure will change with different forages. e.g. silage cost will lower litre cut-off, but crop (due to low cost) will increase cut off litres. In my opinion, the short answer is: milk her if she's worth keeping, or cull her. An entrenched in many dairying areas is the 'carry-over cow'. She is the greatest drain on farm profit of any animal on farm!

This issue raises a bigger question that is rarely addressed: the economics of longevity, of culling for economic reasons and the high cost of involuntary culling – management causes.

An extensive study was conducted in Ontario, Canada, by the University of Guelph on this subject. Some interesting statistics, paradigms for making decisions for culling, and actual classifications of cull cows have been reported. Only 21.6% of culled cows left the herd for 'optimal culling' reasons. That left 78.4% in the 'involuntary cull' category. Needless to say this represents a major cost to offset against farm income. In this study, the non-optimal cull cows represented a loss of income of around \$5000/cow culled.

This cost is made up by lost milk production, depreciation and reproduction losses (calves). At varying rates of depreciation, and taken out to 10 lactations, the study revealed the most profitable lactation is the fourth. Lactations either side of this declined in a 'bell-shaped' graph. The greatest impact in the fourth lactation is mature-cow production capacity. We must care for cows well enough to make this.

Taking some nominal figures (springer \$2000 and cull \$600) we have a depreciation cost of \$1400. Obviously, the more lactations she completes the lower the depreciation cost/litre. The Australian average is 4 to 5 lactations. Ongoing increases in raising replacement heifers will only accentuate this cost.

Nutrition contributes significantly to profit through milk production; the higher the litres per lactation the more efficient feed-to-milk conversion is, but at the same time it has a major impact on longevity very directly through improved cow health. Herd testing is also an invaluable management tool for improving the very poor 'optimal culling' percentage. An optimal strategy involves cows surviving 4 to 5 lactations, and removal of inferior cows promptly.

The Canadian study estimated the benefits of solving the involuntary culling problem at \$509 for every cow in the herd per year through depreciation, reduced production costs and increase income.