



Programmed Production

Feed Budgeting is Programmed Production. The single greatest limitation to both milk production and farm profit is feed shortage – underfed cows! Cows have fixed maintenance cost and land has a fixed capital cost independent of production. It requires 70 mega joules to keep a Holstein alive at 2.5c/MJ or \$1.75/day. Land at \$6000/acre and an investment return of 5% is \$300/acre. It does not require too much math to understand the higher the milk income, or tonnes of dry matter harvested per acre, the more profit a farm will produce by diluting these fixed costs through higher volumes.

For the farms I work with I prepare, firstly, a Feed Budget 'Post-Mortem'; a feed budget for what was actually consumed by cows over the past twelve months. I am able to do this very accurately from monthly ration analysis of the last year. From this 'post-mortem' we can highlight monthly intake shortfalls, what the ration energy, fibre and protein densities were, and then make decisions on what feeds will fit the nutrient deficiency criteria and fill the feed shortage for any given month.

We are now well equipped to prepare a Feed Budget for the next twelve months. It is not difficult to produce a nutritionally well balanced ration in spring with optimum intake; however, this is only two months (at best) out of twelve. The spring ration with 20+ kgs DM intake and an energy density of 12 MJME/kg DM, 32% NDF (fibre – ensuring adequate effective fibre/rumen mat) and 18% crude protein is our goal for the other 10 months also.

These three nutritional parameters of energy, fibre and protein are never separate as all must be correct to have cows eating 20+ kgs DM. Obviously, a spring ration does not occur year round so budgeting, or planning to enable us to offer such a ration is paramount to optimising the genetic potential for milk production you have so carefully bred. Herd averages in the 9000 to 10,000 litres (300 days) are not impossible in grazing based dairy farming. I have several very diligent farm operators doing just that with profit margins correlated to this level of production.

I am well aware that downturns in the dairy industry have consequences, as every business that services the dairy industry also suffers financially. However, I am alarmed at variations in pasture growth rates this season. The variations are great, and can be directly attributed to reduced fertilizer applications. In a very good season, these variations are magnified. We must understand our production/profit drivers and manage our businesses not to collapse through financial budget cutting of these essential drivers. For many, this is their first feed issue.

Volatility is predicted as the greatest threat we will face in the future, so there is a real need to review management practices of the past to meet this potentially destructive threat. Maintaining a sustainable level of productivity through variable prices by financial management to ensure productivity does not suffer is essential. It can take years of buoyant milk prices to restore farm productivity after a period like we have just experienced when reduced fertilizer has impacted pasture growth. The fear is; will we be back on top before the next price crash?

The Feed Budget 'post-mortem' without fail highlights our weakest production period, which for many is also the highest milk price period: from Christmas to mid-year. Although my original goal when I started preparing Feed Budgets, was to drive silage harvest, as I believed many farms were capable of harvesting far more silage than they actually did. This certainly bore fruit with many farms increasing in silage harvested by 50+%, simply through aggressive management from a realisation of the sheer volume of conserved fodder needed to feed their herds throughout a full year. This produced a profit benefit from increased milk production.

The 'second generation' benefit came from a well planned and executed summer forage cropping program, and far exceeded the financial benefits of more silage. In southern Victoria and Tasmania large volumes of turnip, and rape in drier areas, have been produced under dryland conditions. The past dry summers have honed cropping skills to successfully grow turnips on very little rainfall. Last summer's increased rainfall produced extraordinary yields, some as high as 10 tonne DM/ha (double our budgeted yield). For those in Northern Victoria and NSW, there has been some excellent research work done by the Dairy Research Foundation, (Faculty of Vet Science, Sydney University) with summer fodder crops at Tatura and the Hunter Valley. (Contact santiago.farina@sydney.edu.au)

The Feed Budget 'post-mortem' reveals a declining plane of nutrient densities from mid-November and rapidly falling away in December. As soon as energy/protein decline and fibre increases, intake drops off fairly quickly. So December is when we plan to have turnip ready to graze. Generally, in southern Victoria, we sow an eight week variety in late September for December grazing. Likewise, sow end of October for January grazing. We then sow early November with a 12 to 16 week variety for February/March while we still have good soil moisture for germination. At this same time, in recent dry years we have also sown some sorghum as either back-up, additional silage or increased grazing in late summer/early autumn when pasture has all but left the ration.

The December, January and February paddocks can all go back to pasture mid-March. The later crop paddocks often go to cereal crops for winter grazing, or cereal/legume for early silage cuts and back into turnip. A simple formula of 4 kgs DM turnip/cow/day times the herd number, times 31 days divided by 5 tonne DM/ha (dryland) gives us the area required to be sown for each month. Turnip is high energy, high protein and low fibre: a perfect match to maintain nutrient densities with silage and intake, which equals strong summer milk production.