

Profit and Management Drivers Of Different Farm Systems

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Over the last 22-23 years Southlands dairy industry has grown from a mere 12,000 cows to approximately 520,000 cows today. The dairy industry now contributes approximately \$1.5-1.8b in farm gate revenues alone to the Southland economy.

There is no doubt that individual businesses have grown markedly as well. Certainly my client base has shown a tremendous growth in the number of cows per business entity (350 cows to 655 cows in 20 years).

Whilst the first 15-18 years of the modern Southland industry has been about expansion, latterly there has been a trend towards increased production per unit – be it per cow or per hectare. There is a trend towards higher feed input systems. This has been driven by mainly high land values, conversion costs and since GFC reduced availability of funds.

However, although we know we have had increased production per hectare (and per cow), are we getting true productivity growth or improved profits or are we just competing for bragging rights? Just like sheep farmers go to the pub to skite about lambing percentages, dairy farmers do the same. We all know business analysis with a beer in your hand is not particularly objective but we do see many management systems or farm management advice promoted based the single KPI of production per cow. Farmers are a particularly competitive bunch – “Jane down the road is doing 550kgMS/cow so if she can do it then I’m going to do it as well”. Similarly, they tend to be always looking for the silver bullet, a salesperson coming in the gate saying they can increase your cows production tends to get a better hearing than an accountant who is focused on the bottom line result.

About 10 years ago I started analysing the productivity performance of my clients with the view of identifying opportunities to improve performance. The following data that I will present is from this analysis which may or may not be representative of the whole Southland industry but I am reasonably confident the trends will be.

There is little doubt that production has improved - +17.8% in the last 8 years from 1138 to 1340kgMS/ha. Incidentally, there is always a debate which indices we should compare – to me per head production is meaningless – anyone can get 500kgMS/cow simply by dropping stocking rate.

This growth in production has resulted from increased stocking rates (though not comparative stocking rates), but mainly through better feeding.

Cows are getting more efficient improving the conversion of their bodyweight into milk from 0.85 to 0.93kgMS/kgLW. Although I’m sure cow quality (genetics) is improving, most of this

improvement is through better feeding and most of this is through concentrates. Eight years ago we were feeding 100kg/cow of grain. Now we are feeding closer to 600kg/cow or a 400% increase. In fact total feed costs have been increasing at a rate of 20% per annum.

So we have increased production through increasing feeding but the real question is “are we making more money because of it?”

Well up to two years ago the answer to that was definitely not – at the same payout in 2011 we made no more money per hectare than we did in 2006. However, in the last two years perhaps we have learnt something and perhaps now we are improving profit? Although the R^2 is only 28% we are now improving profit by \$50/ha/year (net of feed costs).

The question of this SIDE session is thus, do high input systems make more money than low input systems and what are the management implications? Farmers are very polarised when it comes to this question – if you take one stance you immediately alienate half of the dairy farmers. So at the risk of doing this the following is an analysis of the 2012/13 performance of my clients. The database is split into what I call low (<1150kgDM/cow), medium (1150-1650kgDM/cow) and high (>1650kgDM/cow) bought in feed. This includes all bought in lactation feed and includes applied nitrogen.

2012/13	<u>Low</u>	<u>Moderate</u>	<u>High</u>
Feed Imports/cow	<1150	1150-1650	>1650
Stocking rate	3.00	3.15	3.10
Cow LW	463	469	497
KgMS/ha	1226	1391	1531
KgMS/cow	408	441	494
KgMS/kgLW	0.88	0.94	0.99
Empties	10.8%	9.5%	8.1%
Silage/cow	330	436	552
Concentrates/cow	149	387	958
Nitrogen/ha	169	182	168
Pasture Utilised/ha	11.9	12.5	12.2
Milk Income/ha	\$7125	\$8,069	\$8,878
Cow wastage	\$-39	\$-3	\$+46
Feed Costs/ha	\$775	\$1,230	\$2,188
Margin/ha	\$6,311	\$6,836	\$6,736

From this you will note that obviously both production per cow and production per hectare rise with increasing inputs. Stocking rates don't necessarily change however liveweight per hectare does (1390kg/ha to 1480kg/ha to 1540kg/ha) – cows are bigger. Feed inputs increase in both silage fed and concentrates but not nitrogen – nitrogen application seems to be independent of farm systems.

It was interesting to note that empty rates were lower under high input however in other years this has not been shown.

Utilised pasture is similar but it might be that low input farms are at an earlier stage of their development. That is, a conversion farm might be more likely to be a low input farm and I have always argued that it is important to get the pasture management right before you move onto higher inputs.

For the 2012/13 year the medium input system came out tops for margin of income over feed costs but at the end of the day pasture utilised has by far the biggest driver of profit. Of note though, there was less than 5% difference in margin between the top farmers in each of the input systems.

I have argued that it doesn't matter what system you employ so long as you achieve the best under that system you will be fine. DairyNZ and DairyBase analysis shows that on average system 2 and system 3 farms are more profitable than system 4 and 5 farms.

However, the top operators in each system are similar. This means there is a much bigger range in the high input systems and it isn't for the faint hearted or the average operators.

But at the end of the day the single best farm management KPI indicator of true profit is Utilised pasture. With a R^2 of 87% it a pretty good indicator – and so it should be!