THE SYSTEM OR THE COW? WHAT ABOUT USING YOUR SKILLS TO MANAGE YOUR RESOURCES AND OPTIMISE YOUR PROFIT!

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Take home messages

- **Most farms now have a diverse resource base and we should expect that profitable systems could look very different**
- **These systems should evolve from decision making based on sound business principles**
- **We should not be fitting systems to the cow, as the proportion of investment in the herd, compared to the rest of the business, is small**
- **In order to determine what cow best suits a given system farmers must have an intimate knowledge of their own system and what drive profit in it. Less than 10% of farmers are capable of this**
- **If a change in breeding direction is to be undertaken it is likely that there will be a requirement to increase skill level as well.**

Background

The "cow or the system" is this subject really up for debate? I would hope not. If you think about it why would anyone take say 10-20% of their asset base (the cows) and try to make the other 80-90% fit around that. It doesn't make economic sense, but it seems to be a question we're obsessed with.

The reason for this obsession is that we have a strong view of the world and we identify with those that do things the way we do. It is possible that different systems, that hopefully emerge from logical business decisions, could require vastly different qualities in the cows to optimise the performance of that system.

So, what might appear to one person as someone fitting a system around a cow, could just as easily be a different cow emerging from a very different system.

Benchmarking, and lets face it that is what comparing one method or system to another is, involves 5 steps:

1. Identifying areas to improve
2. Finding what the top 5% do (the benchmarks)
3. Understand best practice
4. Adapt the practice
5. Monitor and continuously improve

As an industry we tend to do the first two steps quite well, however we are very poor at the last three and this often leads to a situation where we end up "doing all the right things the wrong way!"

The last 10 years in dairy farming research have been exciting. There have been many interesting pieces of work that have provided the possibility of significant gain to the

dairy farmer. Yet many of these technologies have not led to the expected increases in farm profit that we might expect.

There is little argument that dairy production systems worldwide have become increasingly complex, and that the introduction of even simple technologies into these complex systems has been a major challenge for dairy farmers. Dairy farmers have exhibited considerable eagerness to implement these technologies and methodologies in the last decade to the point where modern farming systems bare only a slight resemblance to those they emerged from.

Table 1 illustrates some of the farming trends that have taken place. Many proponents expect these trends to continue and, that even late adopters will move down this path. At the same time total factor productivity (TFP) in the Australian dairy industry remains low at 1.5% per annum. Why is this the case? Clearly, if the best producers are successfully implementing these innovative technologies, and achieving high returns then this ought to be the way of the future!

Table 1. Trends in Australian dairy farming systems

	1995	**2005**
Herd size	113	270
Production/cow (kg MS/cow)	280	330
Production/ha	392	495
Purchased feed (% diet)	10	38
Irrigated area (ha)	20	45
Stocking rate	1.4	1.5
Pasture utilisation (t/ha)	7.8	7.6
Return on capital (%)	2.4	2.4

Over time we have continually compared what the best farmers are doing with the average and used this as a way of benchmarking our way forward. While it is useful to know the trends there is unfortunately no direct link between what they do and profit. If we do not understand “How” they are doing it we will not get a profitable outcome.

If we take the trends in Table 2 we might conclude under this flawed system that simply:

1. Milking more cows
2. Producing more per cow
3. Producing more per hectare
4. Purchasing in a greater proportion of the cows diet
5. Having more irrigation

will lead to increased profit. Table 1 illustrates clearly that a general procession towards the characteristics of farming systems of the better producers does not result in increased profit.

Table 2. Comparison of the top farmers to the average

	Top 10%	Average
Herd size	409	310
Production/cow (kg MS/cow)	315	257
Production/ha	883	593
Purchased feed (% diet)	24	17
Irrigated area (ha)	30	25
Stocking rate	2.8	2.3
Pasture utilisation (t/ha)	10.5	7.8
Return on capital (%)	9.5	2.4

The last decade has seen a rapid diversity in two other less obvious areas, these being, firstly increasing diversity in the resource base of individual farms and secondly, increasing divergence in farmer skill base. Since these traits are far less obvious than the technologies and trends within the industry, they are given far less attention when the usual profit drivers are analysed.

Detailed analysis of these farming characteristics in Tasmania has shed light on why the profitability of individual farms varies so dramatically.

Where you're going and how to get there?

The areas which dairy farmers in Tasmania require skills in to optimise profit are pasture management, business strategy, animal nutrition and herd management. A low level of skill in any one of these areas would mean that the business would be limited in profit. However, it is almost impossible for the business to be profitable if pasture management skills are limiting, such is the impact of pasture utilisation in Tasmania.

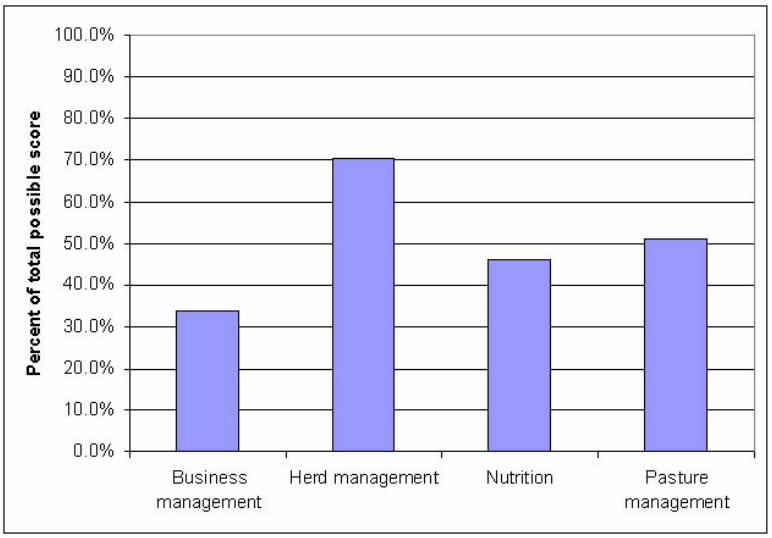

Figure 1. Average skill level of Tasmanian dairy farmers

A skill audit of Tasmanian dairy farmers revealed that on average skill levels within the industry were quite low (see Figure 1). In fact, farmers had only 50% knowledge of the three key areas of business management, nutrition and pasture management. Farmers faired slightly better in the area of herd management, however this area has the least impact on farm profit.

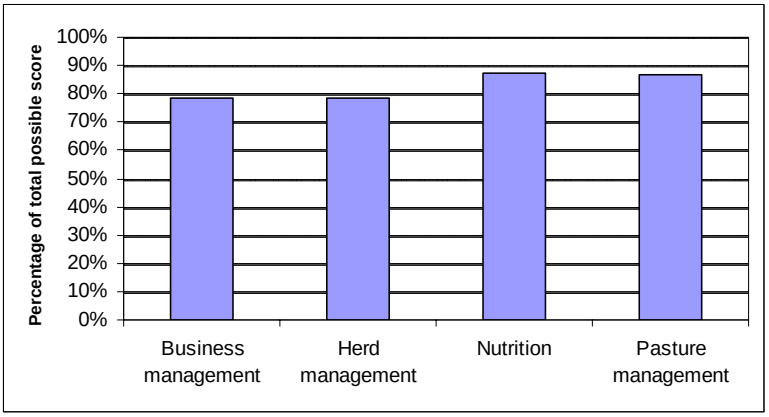

Figure 2. Skill level of the top 10% of Tasmanian dairy farmers

It is clearly evident that it is the skills that the best farmers posses that is driving their business success rather than what they do or the technologies they use per ha.

Farm resource base

Many farms have similar resources but all will vary as we investigate in more detail. This means that all farming systems will look different when they reach optimisation (that is when they are most profitable). What we have found, is that those farms that are performing poorly have gravitated to look like what the most profitable ones metamorphosed to. The farming system should evolve from a series of sound business decisions. Because of the complexity of these decisions substantial analysis is often required. A far less taxing methodology is to do what the best farmers are doing.

The problem with this is that because we are such a visual species, the things we see as being different are the things we emulate. In actual fact there is only a very weak link between the things we see on a farm and the things that drive farm profit.

The resources of the farm, or what we have invested in, are what we need to use to effectively drive profit. As an example there is much research to show that irrigation in Tasmanian can be a very profitable investment. Many farmers have proven this, but there are also farms with irrigation that are not profitable.

So the technology per se, does not drive profit. In this particular case it is often the fact that the farm is poorly suited to irrigation, it may have large lifts, light soil or expensive dam sites. Similarly it might be the fact that the farmer skill base is limited, and that irrigation grows more grass yet the manager is not capable of capitalising on this.

Farmer skills (Farming foundation)

So, now the somewhat touchy subject of farmer skills. Detailed analysis of farmer skills in Tasmania has indicated that this, above all other aspects of the dairy business drives farm profit. It is however not the easiest parameter to quantify.

There is now a strong link between what we call key performance indicators (KPI's) or the drivers of farm profit and the skills associated with these. So, where in the past we would quote drivers such as stocking rate as being crucial to farm profit, we now recognise that increasing stocking rate requires additional skills. In fact increasing

stocking rate without an accompanying increase in management input will increase the riskiness of the business and in all likelihood decrease farm profit over time.

Farms are not factories and the input/output relationships are complex. The systems in farming are both complex and leaky, a far cry from the predictable relationships associated with factories. This is the main reason that we do not see research results replicated on farm. What we see is a far greater range of results from a reduction in farm performance through to results that greatly exceed those demonstrated through research. It is highly conceivable that the best farmers possess management capability far beyond that of the managers of research facilities, but this is the exception rather than the rule.

The sporting comparison

Like or hate Australia on the sporting field, one thing that is generally agreed is that as a nation we are very competitive. In fact, given the size of the nation it could be easily said that we are second to none in this area. The reason is not that Australia is blessed with an overabundance of natural talent, but rather that a professional approach to sport has been adopted.

As the transition from amateur to professional sport has taken place, Australia has been a leader in the area of investing heavily in its athletes. Indeed the recent Olympics are a good example (see Table 3). Australia was fourth on the list of medals yet had by far the smallest population of the top 5 nations.

Table 3. Analysis of countries at the 2004 Olympics based on gold medal performances and population

Country	Gold medals	Population (million)	Medals/million people
USA	35	275	0.13
China	32	1261	0.03
Russia	27	146	0.18
Australia	17	20	0.85
Japan	16	126	0.12
South Africa	1	45	0.02

Within sporting competition it is very hard to hide between a range of diverse goals and objectives while this is often the case in farming. The rules are firm and enforceable in order to determine a winner. However winning in business requires most of the same attributes as competitive sport; ability, dedication and determination. These are certainly the attributes of winning farmers, perhaps even more so than in sport because natural ability will only take you a fraction of the way in the dairy business, but may well take you a great distance in sport.

In 1981 Australia established the Australian Institute of Sport, and this, not surprisingly coincided with a dramatic improvement in our sporting performance. Since then several more have been established at a State level and even by individual sport. Now Australia has some 63 individual world champions.

Australia aside – the best of the best in any sporting endeavour exhibit these key success traits and it is from these that we can learn. The tools or technologies of the

sport take on a much lower level of importance than they do in other areas of business. We have been conditioned to accept that research and the associated technologies will save us. Whereas in sport it its recognised that the individual is the key to success and that fancy swimsuits, bats or boots are a distant second.

The relationship to the system and the cow?

How does all this relate to systems and cows? Quite simply, those farmers that have adopted a professional business approach, understand the theory of business, and have attained the necessary skills are returning excellent results in an environment that others have stated as being impossible to make even a modest profit. The reality is that the environment will only continue to get harder as is highlighted in Figure 3, the terms of trade for Australian dairy farmers appear to be worsening.

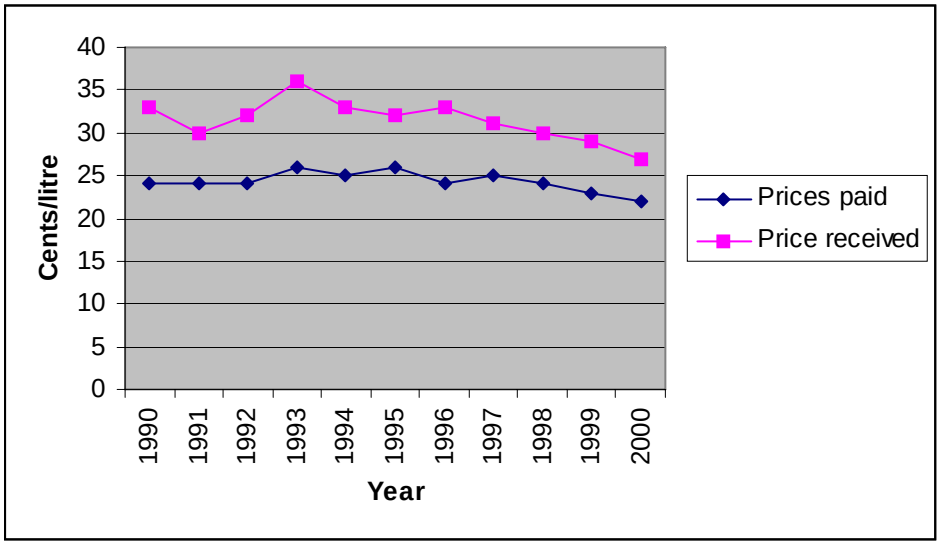

Figure 3. The terms of trade for Australian dairy farmers

The best farmers are reluctant to boast of their performance because, unlike the sporting arena, there is little advantage and there is certainly the fear of being ridiculed by your peers. There is an unfounded belief in farming in general that if we promote our success then prices will be lowered. As a result the good farmers feel that they must maintain their silence about their achievements. This means that promoting skill development is difficult.

Committing to the learning process is also a challenge that many farmers choose not to accept. Having finished formal education at whatever level many farmers then put it behind them and focus heavily on the practical side of farming. In addition to this, and this is just like sport, there is the need to practice these skills to the point where they become intuitive, or second nature.

Knowing what you don't know

The lack of acknowledgment of those farmers that are performing well means that the promotion of their commitment to training, learning and practicing of management and technical skills has many farmers failing to recognise that they are the limiting factor in the business. It is equally as hard for someone to highlight this fact and to then analyse the skill requirements of the farmer to correct this. It is far easier to allow our visual side to dominate and highlight missing technologies and system techniques.

One thing that you can be sure of is that if the farm performance is sub-optimal it is the lack of skills that will be the root cause. What is important is to change our thinking process. The first step is to establish what level of performance we would be happy with, and then to benchmark against businesses with similar resources. KPI's can then be identified and identified for improvement, but the final step, and the one most often omitted is what skills must I acquire to ensure the success of shifting the drivers of the KPI's.

If you lack the necessary skills to determine the most appropriate system for your resource base then what hope have you got of determining the right cow for the system. Will it even matter, given that the system is probably inappropriate in the first place?

Conclusion

To be the best takes a number of particular attributes, the most important of which is a decision to be just that. The worldwide dairy industry is based around supplying the best quality product at a world competitive price. This is something that the best farmers in many countries around the world are currently doing. The outlook for dairy products is strong, and this means there will always be consumers for the end products.

At the farm level only the most skilful, talented and determined will be able to flourish, but many others can survive by working long and hard and leaving the fruits of their labour in the business. To really do well the key is to look at the farm resources and utilise them in the most efficient way by having the highest possible level of skills associated with the key drivers of the business.

An outcome of the implementation of these skills will be a continually evolving system, the cow that is milked in this system will require as set of characteristics specific to that system. If the system can look different the so too can the cow!

Basil Doonan graduated from University of New England in 1992 with a degree in Agricultural Economics. He returned to Massey University (NZ) in 1997 to complete a post graduate degree in Farm Business Management.

He spent 12 months as an agricultural economist before joining the Dairy Branch as a dairy adviser. He has spent 12 years running farmer groups specialising in both technical and business subjects and consulting to farmers and agribusiness.

Basil is now involved in a private consulting firm and deals primarily with dairy and beef clients. His clients range from small single operators to large corporate farms.

He has been awarded a Queens Trust scholarship as well as the George Wade Medal for services to agriculture. He enjoys horseracing, cricket, rugby and fishing.