MILK VALUE MONITOR

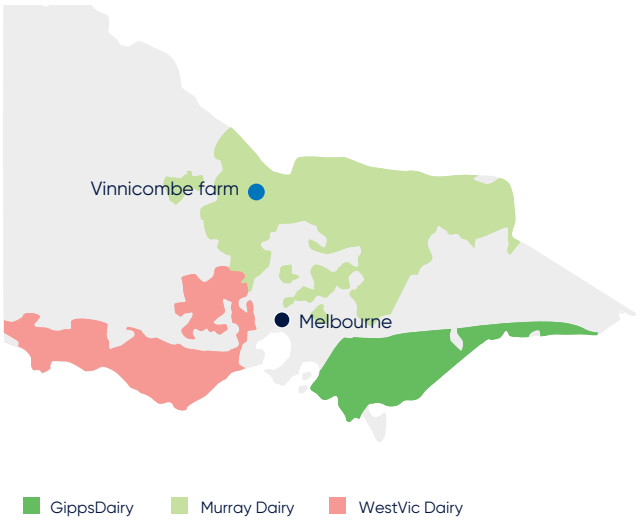
Dehne and Sarah Vinnicombe

CASE STUDY

Farm background – the people

Sarah grew up on a wheat farm in England and moved to Australia about 20 years ago. Dehne grew up in a farming family at Yarrawalla and started share-farming for his grandmother when he was in his early 20s, milking 110 cows. A few years later he went into partnership with his father Ron, expanded the land area and increased cow numbers to about 220 cows. In 2011, they purchased another 220 ha farm and in 2013 they purchased a additional 283 ha farm (neither of these had irrigation water share when purchased). Since then there has been continual growth in cow numbers with the milking herd currently about 450 – 500 cows. The Net Worth of the partnership is currently about $9 million. There are generally three paid employees plus the owners' labour. They have four school age children.

Farm location



Farm description – at a glance

Farm details	Farm system	Farm performance ($)
People: Dehne and Sarah and generally 3 employees	Currently transitioning from grazing to Total Mixed Ration system	EBIT per kg MS $1.28 average with a range of $0.89–$1.72 over the past four years
Land area: 850ha useable	Herd type: Predominantly Friesian (previously had some more crossbreds)	ROTA 3.2% average with a range of 2.4%– 4.5% over the past four years
Average rainfall: 370mm (long-term)	Herd number: 450–500	
Irrigation: 1300ML high reliability water share	Split moving to year-round calving pattern	
	Concentrate feeding: 2.3 t DM/cow/year (1.9–2.9)	
	Proportion of homegrown feed in the diet 80% (61–89)	
	607kg Milk solids/cow (565–680)	
	Production % liveweight 111 (103–124)	

Australian Government

Dairy Australia

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KEY TAKE HOME MESSAGES

"Don't just focus on the cash situation, keep an eye on your growth in wealth which might include building livestock numbers or fodder reserves" (Dehne). They have grown their wealth over time through increasing livestock numbers and capital growth in water and land values over time.

"Don't over-capitalise too early in your farming career" (Dehne). They have managed the evolution of the business in a way that has maintained financial flexibility so that they are in a position to take advantage of opportunities as they arise. (Dehne recognised that some might view this as a bit ironic when they are about to make a huge investment in the Freestall barn etc but, his view is that not over capitalising for the last 20 odd years has put them in a position where they can make this kind of investment without moving into a particularly risky equity position.)

The story

Farm system

The farm is located at Yarrawalla on the drier, western edge of the Murray Dairy region (annual average rainfall is about 370mm). The milking area consists of about 28 hectares (ha) of irrigated Lucerne and 200 ha of irrigated annual pasture. The 620ha of non-milking area is generally sown to either annual pastures or cereal crops. Young stock run on a separate block nearby consisting of 259ha of irrigated and dryland annual pastures, while a third block (257ha) is used for cereal silage and was also used for grain production until the last couple of years. There is about 200ha of unusable land, which is mainly bushland. They own a highly reliabile water share of 1,300ML and also purchase water on the temporary market depending on conditions. Irrigation water use varies depending on the price of water, price of supplementary feed, and seasonal conditions. Irrigation use was 1,996ML in 2017/18 and 268ML in 2019/20.

The location of the farm could be considered as having high exposure to effects of changing temperature and rainfall because it is at the lower rainfall end of the Murray Dairy region. However, the production system is quite well buffered against climate risk because of the moderate stocking rate compared to the regional average, a large total farm area to grow the majority of the silage and hay requirements, and a relatively large holding of high reliability water share (1,300ML, or 2.7ML/milking cow).

They currently have a milking herd of 450–500 cows, with calving split between spring and autumn although it is moving to year-round calving. The herd are predominantly Friesians and have an annual milk production of about 550–600kg milk solids per cow but, this increased to 680kg milk solids per cow in 2019/20 with higher levels of concentrate fed. Concentrate feeding has increased from about 1.7 t/cow per year to 2.9 t/cow over recent years.

The farm averaged a Return on Total Assets of 3.2% over the four years of data gathered in this study, which is above the Dairy Farm Monitor average of approximately 1.5% for the region over those four years. Despite the farm system being profitable in recent years when many in the region faced significant challenges, they are about to (in October 2020) move to a Freestall barn/Total Mix Ration system.

With the TMR system, they will aim to grow all the fodder required but, will purchase grain. The focus of their fodder production will be to generate a high yield per ML of water and of high enough quality to support high milk production per cow. They plan to grow cereals, maize, and vetch. They will use the land and water to produce fodder rather than grain, as their close proximity to grain growing areas also keeps the cost of transporting grain down.

The herd will move to a year-round calving pattern and cow numbers will be increased to over 700 cows in the near future.

Why the change in system when they have been consistently profitable?

The decision to change farm systems involves numerous interrelated factors:

- They have acquired a number of parcels of land that are not connected and while they have operated a grazing system all year round, they have been cutting and carrying substantial quantities of fodder. This has been fed out in a basic feedpad (or in the paddock for young stock) with some associated wastage. They hope the TMR system will enable the wastage for fodder to decrease from perhaps 15% to 2 – 3%.
- The move away from a grazing system will allow them to focus more on using irrigation water to grow crops, such as maize, with the potential for higher yields per megalitre of irrigation water.
- The opportunity arose to lock in a relatively high milk price for several years provided they produced the milk in a relatively flat year-round pattern. They were reluctant to have more cows milking through winter with their current grazing system due to the risks associated with a wet winter with relatively heavy soil types.
- Analyses with several different service providers gave them confidence that the TMR option could be profitable if they were able to lock in a relatively high milk price contract, had adequate equity, and managed the system efficiently.
- The Freestall barn will allow them a greater ability to control the cow's environment during a wet winter and also in hot/humid conditions in summer. This control, and the change in feeding system, will then enable them to target a higher production per cow.
- They have planned the development of the infrastructure to enable further growth in cow numbers over time which will provide a variety of possible roles

for their children to become involved with if they choose to return to the farm in the future.

- Their strong financial performance has enabled them to reach a solid equity position which is an important factor in ensuring the equity position doesn't drop to a risky level during the development phase.
- They are aware that a higher proportion of their assets will be in infrastructure that will not gain value over time and it is unlikely that much of this investment would be realised if they sold the farm, hence they would not have contemplated this investment if they had not achieved a strong equity position.
- They like the idea of having most of their investment located close-by so that they can be actively involved in the management, rather than investing in farms in different districts and being reliant on others managing their investments.

Planning and evolution of their business

They have managed the evolution of the business in a way that has maintained financial flexibility (i.e. haven't over capitalised) so that they are in a position to take advantage of opportunities as they arise. They feel that they have had some luck in that their major expansions/investments have not been immediately followed by a really poor season/milk price combination.

They have had a general plan in their heads of how they will grow the business in the past but, have now moved to a written plan given the different scale and nature of the feedlot investment.

They have planned the infrastructure development so that a 2nd and 3rd barn can be incorporated and enable cow numbers to grow up to 2,500 over the next 20 years.

Key risks in their current farm system

They see running out of fodder is a key risk to their business, so they try to build significant reserves when conditions are favourable. They have ramped up this focus on building fodder reserves before they increase cow numbers with the new barn. They have managed to maintain cash reserves or financial flexibility so that they are in a position to take advantage of opportunities as they arise. They monitor the markets for inputs (irrigation water, grain, silage, hay) and try to build reserves when prices are low/below historic average.

Milking large numbers of cows in a wet winter has been a concern with the current infrastructure.

A number of their other risks are outlined above.

Tactical decisions

They juggle a lot of variables in their system e.g. a cereal crop may, or may not, be irrigated depending on rainfall/irrigation water price and they will then choose whether to cut silage, hay, or strip it for grain (then the grain may be used on farm, or sold, depending on market conditions). Most of these decisions are made based on a 'back of the envelope" calculation, (will the extra return exceed the extra cost? With a bit of a fudge/risk factor overlaid). They generally are reasonably confident in predicting what they will grow from a ML of irrigation water at different times of the year. There will generally be some discussions within the partnership, and at times they may draw on input from their discussion group.

Business Analysis Tools

They have been involved in a Dairy Business Network group where they put their figures into DairyBase for a number of years (and have done several Taking Stocks). They find the process of reflecting on the last year(s) useful, before planning for the future. They have a strong focus on the Return on Total Assets and Return on Equity.

They generally don't do formal budgets/cash-flow budgets, just regularly monitor bank statements etc.

People

Dehne and Sarah try to look after their staff and having staff members that they are confident in has meant that it has become easier for them to get away from the farm for holidays etc as the business has grown.

Common mistakes other farmers make

Don't know their business well enough. (This is partly why they value the annual review. *"Decisions are about the future but, the annual review helps to understand your historical performance and where you have come from"*).

Some farmers don't treat their farm as a business.

ADVICE TO NEW ENTRANTS/ KEYS TO BUSINESS SUCCESS

"Don't just focus on the cash situation, keep an eye on your growth in wealth which might include building livestock numbers or fodder reserves." They have grown their wealth a fair bit through increasing livestock numbers and capital growth in water/land values over time.

"Talk to your neighbours if you want to grow, you don't have to wait until something is advertised."

"Don't over-capitalise too early."
Dehne recognised that some might view this as a bit ironic when they are about to make a huge investment in the Freestall barn etc but, his view is that not over capitalising for the last 20 odd years has put them in a position where they can make this kind of investment without moving into a particularly risky equity position.

The numbers behind the story

Farm details

	2016/17	2017/18	2018/19	2019/20
Milking Cow Numbers	410	475	440	440
Total useable area (ha)	850	850	850	850
Rainfall (mm)	560	330	290	370

Primary indicators

	2016/17	2017/18	2018/19	2019/20
Business Efficiency				
EBIT per kg Milk Solids ($)	1.46	1.72	1.04	0.89
Return on Total Assets managed (%)	3.5	4.5	2.5	2.4

Secondary Indicators

	2016/17	2017/18	2018/19	2019/20
Milk price ($/kg MS)	5.15	5.86	6.38	6.92
Total Variable Costs ($/kg MS)	2.10	3.23	3.77	4.18
Total Feed Costs ($/kg MS)	1.67	2.77	3.50	3.83
Homegrown Feed Costs ($/t DM)	98	112	168	217
Total Labour Costs (paid plus imputed) ($/kg MS)	1.36	1.24	1.42	1.26
Cost of Production (including inventory changes) ($/kg MS)	4.10	4.47	6.90	6.41

Tertiary indicators

	2016/17	2017/18	2018/19	2019/20
Milk solids as a % of Cow liveweight	103	106	109	124
Proportion of homegrown feed in the diet (%)	89	89	80	61
Homegrown feed consumed (t DM) per 100mm rainfall	0.59	0.68	1.0	0.8
Milk solids per Labour Unit	66,202	49,508	47,004	53,490

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