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FINAL REPORT: ANALYSIS OF BUSINESS PERFORMANCE
ON WESTERN AUSTRALIAN DAIRY FARMS

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1. EXECUTIVE SUMMARY

We have completed the full analysis of 36 dairy farms spread throughout the dairying districts of Western Australia ('WA'). Five to seven further farms are presently being completed which will result in the sample group representing approximately 19% of the WA dairy industry. These farms have been compared to the performance of dairy farms in Victoria ('VIC' 2005/06), Tasmania ('TAS' 2004/05), South Australia ('SA' 2004/05) and New Zealand ('NZ' 2005/06).

The conclusions that have been reached as a result of this work include:

Average Benchmarks for Profitability

1. In 2005/06 the WA dairy industry had a significantly lower level of profitability than the VIC and TAS dairy industries. For 2005/06 the return on assets ('ROA') for WA has been calculated at 2.4% compared to VIC and TAS at 6%-7%.
2. In 2005/06 the WA dairy industry had a similar level of profitability to the SA and NZ dairy industries. For 2005/06 the return on assets ('ROA') for WA has been calculated at 2.4% compared to SA at 2.1% and NZ at 2.0%.
3. These levels of profitability exclude changes in values of capital assets. When these are included then in recent years all districts (Australia and NZ) have experienced some significant increases in land values. Over time these opportunities to gain from increases in land value have favoured NZ over Australia.
4. The conclusion that can be drawn is that the level of WA dairy profitability in 2005/06 does not provide the existing dairy businesses with sufficient confidence or funds to grow their business.
5. A second conclusion drawn from these comparisons of average performance with other dairying regions is that in 2005/06 there was not a good case for individuals or companies to relocate their investment in dairying from other regions to WA.
6. The average milk price being received by WA dairy farmers has been increasing at a faster rate over the last 12-24 months than in the balance of Australia and NZ. If the same milk price was received by WA farmers as that which was received by VIC farmers in 2005/06, and if all other farming practices had been unchanged, then the ROA would have been 5.0%; and
 - 6.1. the ROA for WA would have been only marginally behind VIC and TAS; and
 - 6.2. the ROA for WA would have been more than twice SA and NZ.

Average Benchmarks for Cost of Production

7. In 2005/06 the WA dairy industry had a similar Cost of Production ('COP') to South-West VIC and Gippsland (VIC). In 2005/06 the COP for WA has been calculated at \$3.36/kgMS (23.9 c/litre) compared to South-West VIC at \$3.31/kgMS (24.8 c/litre) and Gippsland at \$3.20/kgMS (24.3 c/litre).
8. In 2005/06 the WA dairy industry had a higher COP than TAS and NZ. In 2005/06 the COP for WA has been calculated at \$3.36/kgMS (23.9 c/litre) compared to TAS at \$3.04/kgMS (23.9 c/litre) and NZ at \$3.08/kgMS (26.2 c/litre). [NZ values quoted on basis of AU\$1.00=NZ\$1.12]
9. In 2005/06 the WA dairy industry had a lower COP than Northern VIC and SA. In 2005/06 the COP for WA has been calculated at \$3.36/kgMS (23.9 c/litre) compared to Northern VIC at \$3.51/kgMS (26.8 c/litre) and SA at \$4.01/kgMS (29.1 c/litre).
10. The conclusion that can be drawn is that average WA farm is in a sound position to improve profitability and potentially grow their business if the average milk price can match the two main dairy exporting States of VIC and TAS.
11. A second conclusion drawn from these comparisons (along with other data on the NSW and QLD dairy industries) is that there are not significant human resource issues in WA relating to dairy owner/managers that need addressing prior to the emergence of a more profitable and vibrant dairy industry. The average WA dairy business appears to be already being managed in a broadly competitive manner to their peers in VIC and

TAS. The same conclusion cannot be drawn in respect of SA, NSW and QLD.

Top 10%/Top 15% Benchmarks for Profitability

12. An analysis of higher performing Australian dairy farms which may be assessed as representing the top 5%-15% confirms that the WA dairy industry had a significantly lower level of profitability than the VIC and TAS dairy industries. For 2005/06 the ROA for high performing farms in WA has been calculated at 4.5% compared to VIC and TAS at 12%-13%.
13. An analysis of higher performing SA and NZ dairy farms confirms that the WA dairy industry had a similar level of profitability to the SA and NZ dairy industries. For 2005/06 the ROA for high performing farms in WA has been calculated at 4.5% compared to SA at 6%-7% and NZ at around 5%.
14. The conclusion drawn from these comparisons of top performance with other dairying regions is that there may only be a small number of strong case studies in 2005/06 that would support the contention that good farm business operators in WA can get high returns on invested capital.
15. If the same milk price was received by WA farmers as that which was received by VIC farmers in 2005/06, and if all other farming practices had been unchanged, then the ROA would have been 6.7%; and
 - 15.1. the ROA for WA would have continued to have been substantially behind the 14%-15% ROA for VIC and TAS; and
 - 15.2. the ROA for WA would have been similar to the 6.7% for SA and ahead of the 4.9% for NZ.
16. The comparatively low milk price in WA has resulted in the most profitable businesses requiring a particularly strong focus on cost control. This will have at least partially been at the expense of milk production and revenue generation. If milk price continues to rise then a somewhat different focus will be required to take full advantage of the new trading conditions. This is likely to result in significantly higher returns than is outlined in point 15 above.

Comparative Strengths in Western Australia Dairy Industry

17. There are a number of areas of comparative strength in the WA industry and these are described in more depth in section 2 below. However these comparative strengths include:
 - 17.1. Farm size
 - 17.2. Equity
 - 17.3. Production per cow
 - 17.4. Concentrate costs
 - 17.5. Forage costs
 - 17.6. Core per hectare cost
18. There are a number of areas of comparative weakness in the WA industry and these are also described in more depth in section 2 below. However these comparative weaknesses include:
 - 18.1. Pasture harvest
 - 18.2. Stocking rate
 - 18.3. Milk production per hectare
 - 18.4. Labour efficiency
 - 18.5. Core per cow cost

Potential Growth in Profitability in the WA Dairy Industry

19. From a historical perspective, the WA dairy industry had developed within a regulated dairy market that provided farmers with a higher milk price as compared to VIC, TAS

and NZ farmers. This will have allowed some dairy businesses to survive, and even prosper, with a cost structure that would not be profitable at lower 'export-based' milk prices. The recent history of lower milk prices in WA and the development of a "low cost of production culture" within the WA industry would appear to confirm that the industry has largely emerged from the historical regulated perspective.

20. Increasing pasture harvest will be a key requirement for rapid growth in the WA dairy industry. The impact of higher pasture yields is two fold in that it:
 - 20.1. Reduces the cost of production and increases the profit margin available to business owners; and
 - 20.2. Provides the platform to increase stocking rate, and from this increase milk production per hectare.
21. Some initial comparisons between rainfall and temperature between Busselton (WA) and Terang (South-West VIC) would appear to indicate that there should be an opportunity to increase pasture yields in WA. Where land class or locality in WA cannot provide levels of pasture production competitive with dryland South-West Victoria then there will be a limited opportunity to sustain profitable dairy businesses in the long term. This minimum level of pasture production could be estimated at 4-5 tDM/ha, with stronger long term profitability likely to require 5-8 tDM/ha.
22. Labour efficiency (measured as 'cows milked per 50-hour fulltime staff equivalent' or cows/FTE) and labour costs (measured as 'dollars spent on imputed and paid management and staff per cow) are highly variable within each population of dairy farmers. In this sample group the range in labour efficiency was from 56 to 161 cows/FTE, and the range in labour costs was from \$279 to \$646 per cow.
23. Total labour costs (imputed and paid) are one of the two largest costs on almost all dairy farms. As a result there is significant scope for most farmers to improve in this area and this could provide the WA dairy industry significant productivity gains.
24. Core per cow costs (see definition in section 2) are also highly variable and provide a continuing opportunity for WA dairy farmers to lower their cost of production. In this sample group the range in core per cow costs was from \$318 to \$977 per cow. This ratio does require careful interpretation due to the influence of any support area (runoff/outpaddock), however there is substantial opportunities for many farmers to improve their performance in this area.
25. Although concentrate costs in WA are broadly competitive with other states, there would appear to be a significant opportunity for many farmers to reduce their cost of concentrates and from this decrease their cost of production and improve profitability. In this sample group the range in total concentrate cost was from \$227 to \$365 per tonne dry matter (including an allowance for variable and capital costs), or from \$189 to \$305 per tonne wet matter as a purchase cost.

Potential Growth in the WA Dairy Industry

26. There are two significant areas of opportunity to positively influence the predicted growth rate for the WA milk supply. The first area is through enhancing the existing skills of Western Australian dairy farmers so that they can more readily develop profitable management systems and adopt best practice in this area.
27. The second area of opportunity to positively influence the predicted growth rate for the WA milk supply is through attracting dairy farmers to relocate to WA from other Australian states, from NZ, and from other countries. Given the benchmark data gathered in this project does not provide strong support for this case, promotion of WA should be undertaken through a mixture of case studies and industry support. The industry support should include packaged information on purchasing and operating dairy farms in WA, as well as ready access to the necessary services required by dairy farmers.
28. This review of the WA dairy industry has led to the conclusion that there will shortly be a return to growth in total milk production in WA. The following predictions are made in regards to the amount of growth in the WA milk supply:

- 28.1. Given that the amount of milk produced in WA has been comparatively stable over a time of significantly adverse conditions (both environmentally and financially), it might reasonably be expected that there will be minimum levels of milk supply growth of 2%-4% per annum over the coming 5-10 years.
- 28.2. Given recent increases in milk price and the predicted maintenance of more competitive milk prices as compared to the Eastern States, there should be at least a shorter period of "recovery" in milk production in WA. This could reasonably lead to levels of milk supply growth of 4%-6% per annum over the coming 3-5 years.
- 28.3. Should dairy farmers decide to increase stocking rate at a more rapid pace than in recent years (as recommended in this report), then this could reasonably lead to a period of 2-3 years of milk supply growth of 5%-10% per annum once the present drought conditions have passed.

2. COMPARATIVE PERFORMANCE OF WESTERN AUSTRALIAN DAIRY INDUSTRY

Appendix I outlines in detail the performance of the WA dairy industry in comparison to Victoria, Tasmania, South Australia and New Zealand.

KEY CHARACTERISTICS OF WA DAIRY INDUSTRY PERFORMANCE

There are some distinct areas where the WA dairy industry is competitive with other regions of Australia (and NZ) and these include:

1. **Farm size** – statistics confirm that WA dairy farms milk similar or more cows than the majority of Australia. In 2004/05 there were over 250 cows per farm in WA compared to 217 on the average Australian farm. The project participants averaged 359 cows as peak milking numbers. There are however few economies of scale in dairying with only very small farms being at a comparative disadvantage.
2. **Equity** – average equity percentage is 79% in the project participants which is generally higher than the comparative groups recorded by Red Sky (56%-75%). This should provide a comparative advantage in access to capital should this be required to provide future lifts in productivity.
3. **Production per cow** – statistics confirm that WA dairy farms have higher levels of milk production per cow than the balance of Australia, with the exception of South Australia. In 2004/05 average milk production was approximately 5650 litres per cow in WA compared to around 5040 litres on the average Australian farm. The project participants averaged milk production per cow of 7519 litres (536 kgs milksolids = milkfat + protein) which is higher than in the comparative groups recorded by Red Sky (4121-6754 litres or 350-490 kgs milksolids).
4. **Forage cost** – both the purchase cost of forage and the full cost of forage (including variable and capital costs) was lower than for other regions of Australia. For the project participants, their full forage cost was \$165/tDM (tDM=tonne dry matter) as compared to \$179-\$205/tDM for Australia and \$285/tDM for NZ.
5. **Concentrate cost** – both the purchase cost of concentrate and the full cost of concentrate (including variable and capital costs) are competitive with other regions of Australia. For the project participants, their full concentrate cost was \$305/tDM as compared to \$281-\$340/tDM for the other regions recorded in Red Sky. However given the proximity to grain growing areas there should still be room for WA dairy farmers to reduce this cost in the future.
6. **Core per hectare costs** – the average of the project participants is \$542/ha which is at the lower end of the range of \$531-\$843/ha for the other regions of Australia, and lower than the \$828/ha for NZ. These costs are calculated as (Administration + Cropping (green feed) + Phosphate and All Other Fertiliser + Pasture Maintenance and Renovation + 50% Repairs and Maintenance + 70% Standing Charges + 30% Vehicle Expenses + Weed and Pest + 50% Depreciation) / Effective Milking Area.

There are some key areas where the WA dairy industry is not as competitive with other regions and these include:

1. **Pasture harvest** – the average of the project participants is 5.7 tDM/ha which does not compare favourably with 6.7-9.1 tDM/ha for the other regions of Australia and 11.7 tDM/ha for NZ. SA had a slightly lower level of pasture production of 5.3 tDM/ha. All of these regions had a relatively poor pasture growth year in 2005/06 although WA, SA and South-West VIC could have suffered to a greater degree. However pasture harvest is a critical profit driver for pasture-based dairying and so increasing performance in this area will be important to WA's competitiveness in attracting dairy investment.
2. **Stocking rate** – the average of the project participants is 1.52 cows per effective milking hectare which is significantly lower than the 1.62-2.95 cows/ha for the other regions of Australia and 3.07 cows/ha for NZ. This lower stocking rate is primarily a result of the lower pasture harvest (see point 1 above).
3. **Milk production per hectare** – the average of the project participants is 815 kgs milksolids/ha which is at the lower end of the range of 796-1308 kgs milksolids/ha for

the other regions recorded in Red Sky, with South Australia being the other region with similar levels of performance. Milk production per hectare (not milk production per cow) is the most important milk ratio in a pasture-based dairy business. This lower milk production per hectare is a result of the lower stocking rate which is factored off the lower pasture harvest (see points 1 and 2 above).

4. **Labour efficiency** – the average of the project participants is 110 cows per full time staff equivalent ('FTE') which is lower than the 117-125 cows per FTE for most of the other regions recorded in Red Sky. South Australia performs more poorly with 96 cows/FTE, and northern VIC is similar to WA at 107 cows/FTE on what is predominantly flood irrigated farms. This labour efficiency ratio includes the time committed by the business owners. In almost all dairy businesses labour costs are one of the two largest cost centres (along with feed/supplements).
5. **Core per cow costs** – the average of the project participants is \$526/cow which is similar to SA at \$534/cow but higher than the \$347-\$400/cow for the other regions recorded in Red Sky. These costs are calculated as (Animal Health + Breeding + Dairy Shed Expenses + Electricity + Grazing/Agistment + Freight + Other Expenses + 50% Repairs and Maintenance + 30% Standing Charges + 70% Vehicle Expenses + 50% Depreciation) / Peak Milking Cow

When the Top 15% selection from the project participants are compared to the 'Top 10%' selections for the other regions then the comparative advantages and disadvantages listed above remain effectively unchanged. All of the comparative data is included in the attachments that are provided as Appendix I to this report.

As a result of the lower profit on the project participant farms, they are exposed to a higher level of risk than their counterparts in VIC and TAS in particular. This is highlighted by the following ratio (with SA excluded):

- **Operating profit margin ('OPM')** – 10% for the WA project participants versus 14%-25% for the other regions recorded in Red Sky.

This high level of risk may not only be a deterrent to new investors in WA dairying, but also leaves the existing participants more exposed to reductions in milk price, increases in feed prices, and poor seasonal conditions in particular. The result could be an unwillingness to take action to improve the long term viability of their business for fear that this will leave the business even more exposed to risk.

3. OPPORTUNITIES TO INFLUENCE PREDICTED GROWTH OF WA DAIRY INDUSTRY **ENHANCING THE EXISTING SKILL BASE OF WA DAIRY FARMERS**

One of the major opportunities to positively influence the predicted growth rate for the WA milk supply is through enhancing the existing skills of Western Australian dairy farmers so that they can more readily develop profitable management systems.

Following are the key areas where the WA dairy farms are not as competitive with other regions, and the potential improvements to their position:

1. **Pasture harvest** – the average of the WA project participants is 5.7 tDM/ha and this could reasonably be lifted to 6-8 tDM/ha depending on the mix of dryland versus irrigated land. This would close the gap on VIC in particular.
2. **Stocking rate** – the average of the WA project participants is 1.52 cows per effective milking hectare and this could reasonably be lifted to 1.80-2.20 cows/ha depending on the mix of dryland versus irrigated land (and is reliant on point 1 above). This would significantly close the gap on VIC and TAS.
3. **Milk production per hectare** – the average of the WA project participants is 815 kgs milksolids/ha and this could reasonably be lifted to 900-1100 kgs milksolids/ha which would close the gap on VIC, TAS and NZ. This level of performance would be reliant on points 1 and 2 above.
4. **Labour efficiency** – the average of the WA project participants is 110 cows/full time staff equivalent ('FTSE') and this could be lifted to 115-125 cows/FTSE to match the other regions recorded in Red Sky. This performance would be gained from a mix of management expertise and capital investment (equity in the industry is sufficient to fund this).
5. **Core per cow cost** – the average of the WA project participants is \$526/cow and this includes an additional \$60-\$70/cow associated with the more substantial support areas in WA that often include a beef operation. If this beef operation is retained then the core per cow cost could be reduced to \$430-\$460/cow. If this beef operation was not retained then the core per cow cost could be reduced to \$370-\$390/cow to match the other regions in VIC.

The opportunity to deliver growth in WA could primarily be as a result of the quality and uptake of extension services and professional support to existing dairy farmers, along with a willingness on behalf of farmers to adopt new technology. There is the potential for improved pasture and general business management to provide significant lifts in profitability, and through this significant growth in milk production in WA.

However as this increase in milk production would be a result of 'practice change' on farm, this is less reliable than assuming that existing dairy business performance would reasonably attract further investment. In addition the following question would need to be answered: 'If the WA dairy industry is not adopting these opportunities at present, what new services need to be delivered to dairy farmers to trigger and/or accelerate a lift in business performance?'

ATTRACTING DAIRY FARMERS TO RELOCATE TO WA FROM OUTSIDE THE STATE

The second major area of opportunity to positively influence the predicted growth rate for the WA milk supply is through attracting dairy farmers to relocate to WA from other Australian states, from NZ, and from other countries. Given the benchmark data gathered in this project does not provide strong support for this case, promotion of WA should also be undertaken through a mixture of case studies and industry support.

At present there are few if any project participants whose farm business performance is of a sufficiently high level that they could be readily used as a case study. However there would be quite a number of the participants who could be used to demonstrate high levels of performance in specific areas.

This lack of readily available case studies or strong industry performance will not eliminate the opportunity to attract new dairy farmers to WA. These 'immigrants' to new dairying

districts primarily assume that they can utilise their own skills to gain better returns than the existing population. So it is reasonable to assume that some farmers in this group will continue to pursue the purchase of dairy farms in WA. However they are most likely to choose a district where the natural resources are more in keeping with their previous experience and where the 'fundamentals' look sound to them.

The industry should ensure that there is readily available packaged information on all aspects of purchasing and operating dairy farms in WA. This should include promotional information that includes relatively simple descriptions of the various dairying districts and associated communities, as well as more in-depth packages that include farm performance analysis and contacts for key services so that purchase proposals can be expedited.

The immediate impression that should be created for potential investors into WA dairying is one of professional readiness to assist the purchase and/or development of a dairy business. These initial impressions then need to be backed up by access to professional services.

My understanding is that much of these services are presently available and that individual companies within the industry are already promoting the WA dairy industry in a highly competent and professional manner.

4. SAMPLE GROUP and PROJECT METHODOLOGY

There were 36 farmers who have had their business fully analysed and on which this report is based. There are five to seven further farms presently being analysed that will complete the intended compliment of 41-43 farms. In total this group approximately represents 18%-19% of the WA dairy industry.

The participants group of farmers were those who responded to the promotional material that was circulated, or who agreed to take part after being approached by individual consultants or representatives of Challenge Dairy Co-operative and DAFWA.

Given this group of participants responded positively to the opportunity of being involved in the project and/or either presently or historically had contact with a consultant, it is reasonable to assume that the group is not a genuinely average group. It might be reasonable to assume that this group of farmers represent the top 60%-80% of farmers as it is rare to have farmers from the bottom 10%-20% be prepared to have their business analysed or to employ a consultant.

The comparative groups from Victoria, Tasmania and NZ have been selected on a similar basis to this project. They have either taken part in industry projects (Tasmania and South Australia) or had contact with consultants (Victoria and NZ), and as a result we believe that comparisons between the different groups can be used to draw broad conclusions.

Once the participants were identified they were then visited by a consultant and a consistent set of farm data was collected in the form of a standard spreadsheet with some associated comments. In addition their 2006 Financial Statement was collected wherever possible, or failing this then a copy of an electronic cash book printout for 2006 along with a copy of their 2005 Financial Statement.

The spreadsheet data and annual accounts (or electronic cash book data) was then delivered to Red Sky Agricultural and this data was processed through software called Red Sky Farm Performance Analysis ('Red Sky'). There was a consistent protocol used to process the data that included a methodology to separate from the dairy business any associated beef, cropping or other agricultural businesses where appropriate.

Red Sky includes a number of 'checks and balances' to assist the user to audit data. This ensures cross references between areas such as:

- the amount of livestock bought, sold and retained
- the amount of feed used and cost of feed
- the amount of staff employed and cost of staff
- the amount of fertiliser used, both nitrogen and non-nitrogen
- the amount spent under most expense codes relative to benchmarks

Both the protocol for processing the data and separating the non-dairy business, as well as the protocol used to audit the data would be available on request.

In a number of instances there were follow up questions of the consultant and the participant farmer until such point as we were reasonably satisfied that the data had passed a basic audit test. Although this cannot provide a complete level of confidence in all sets of data, we are confident that on average the data has a high degree of accuracy and can be relied upon for this project.

The data was then used to produce benchmark results, all of which are calculated on a weighted average basis. These included an average benchmark for the entire group.

In addition a Top 15% was calculated by selecting the top 6 farms based on return on assets ('ROA'). The final report will also include a Top 15% based on profit per hectare.

The comparative data includes benchmarks from Victoria for South-West Victoria and Gippsland (both largely dryland), and Northern Victoria (irrigated). There are also benchmarks from Tasmania (partially irrigated), South Australia (mix of dryland, partial irrigation, and full irrigation), and New Zealand (largely dryland).

All of these districts/countries have data sets named as Top 10% with the exception of South Australia. These are generally an exact selection of the top 10%, although in some

cases this would be a selection of the top 11%-12% due to sample size. In all cases Red Sky ensures that a minimum of 6 data sets comprise any published benchmark to ensure the privacy of all contributors is protected.

Although this could mean that the Top 10% benchmarks from other districts/countries could be a slightly more elite selection than the top 6 farms from the WA data (which are the Top 15% of the data set), this should not significantly detract from the conclusions that can be drawn from the comparisons.

5. SURVEY RESULTS OF PARTICIPANT FARMERS

As part of the project the participants were asked the following questions. The responses to each question are reported for the average of the State ('WA Average'), and the top 15% ('WA Top 15%').

1. What if any changes to your present dairy farm area is planned for the next 12 months?

WA Average	WA Top 15%
+ 14.5 ha	+ 28.3 ha
+ 5 %	+ 8 %

2. What if any investment or divestment of dairy land and building assets is planned for the next 12 months?

WA Average	WA Top 15%
+ \$ 102,100	+ \$ 316,300

3. What if any changes to milking cow numbers is planned for the next 12 months?

WA Average	WA Top 15%
+ 56 (22) cows	+ 23 (42) cows
+ 16 % (6%)	+ 5 % (10%)

There appeared to be an anomaly in the base figures for question 3 due to the stated intent of one farmer in particular. The results in brackets are the predicted change in livestock numbers based on additional dairy farm hectares and present stocking rates.

4. What if any changes to the number of full-time staff equivalents is planned for the next 12 months (people)?

WA Average	WA Top 15%
+ 0.20	+ 0.25
+ 5 %	+ 6 %

5. What if any changes to your present irrigated area is planned for the next 12 months?

WA Average	WA Top 15%
+ 0.3 ha	+ 0.0 ha
+ 1 %	+ 0 %

6. What if any nett change to your investment in vehicles, plant and machinery is planned for the next 12 months?

WA Average	WA Top 15%
+ \$ 10,300	+ \$ 23,300

7. What if any investment in non-dairy (off-farm) assets is planned for the next 12 months?

WA Average	WA Top 15%
+ \$ 4,100	\$ 25,000

8. Number of off-farm days holiday per person per year?

WA Average	WA Top 15%
14.4 days	18.2 days

9. Number of days training per person per year?

WA Average	WA Top 15%
4.0 days	4.3 days

10. Average age of working owners (selection of 5-year bands)

WA Average	WA Top 15%
40-44 years	45-49 years

The results of the questionnaire support the results of the balance of the project. There is clear intent on the part of many of the participants to invest in their dairy farm business. The farmers who comprise the top 15% intend to make the largest proportional changes to their farm business.

One point of note is that the average age of the participants in the project is between 40 and 49, and most probably under 45. This is comparatively young for a dairy farming population, and should be viewed as a positive result. This comparatively young average age could reasonably be interpreted as inferring that there are a larger proportion of dairy farm owners in WA at the point in their business 'life' where they may be more likely to further develop and grow their investment in dairying.

Given the comparatively small sample size, the lack of statistical representation across the entire population, plus the fact that surveys are simply a poll of people's intentions, it is important that the answers to the questionnaire are not accepted too literally.

6. HISTORICAL REVIEW OF WESTERN AUSTRALIAN DAIRY INDUSTRY

It is widely accepted that the most reliable method of predicting future trends in an industry (or any population) is to observe historical performance and integrate this with the prevailing business conditions of these historical times. Then if one can determine the present business conditions, including where they are similar to earlier conditions, then there are reasonable opportunities to make reliable predictions.

However predicting the future carries a low level of reliability. In the case of the WA dairy industry it is complicated by several events that ensure if the recent past (last 5-7 years) is used then reliability will be particularly low. There have been a number of events of significance that are unlikely to be repeated. These include:

1. Deregulation of the domestic milk industry in Australia in 200/01 which had a bigger impact in states such as WA as compared to VIC and TAS.
2. A sequence of very dry years that reached its pinnacle in 2002/03 and coincided with a significant drop in international milk prices.
3. The emergence of Challenge Dairy Co-operative as a significant milk processor in WA, though one which has been unable to match the milk prices paid by the other milk processors in WA or those from the Eastern States.

The combination of these factors has made for an extended period of relatively difficult trading conditions. Although a further significant drought year has occurred in 2006/07, there are some positive outcomes from the points listed above.

These include a dairy industry with a comparatively low cost of production that can respond relatively quickly and profitability to an upswing in trading conditions. However it is my view that the effects of conditions both before and after deregulation are still having some impact and need to be considered when predicting future trends in milk supply.

From a historical perspective, the WA dairy industry has developed within a regulated dairy market that provided farmers with a higher milk price as compared to VIC, TAS & NZ farmers. This will have allowed some dairy businesses to survive, and even prosper, with a cost structure that will not be profitable at lower 'export-based' milk prices. Although there has been significant adjustment by dairy farmers since deregulation, areas such as labour efficiency and core per cow costs, which are comparatively poor in WA, highlight the opportunity for further progress.

Pasture harvest per hectare, both potential and actual, is a key profit driver in pasture-based dairying. High pasture harvest is a key component in attaining a low cost of production. Where land class or locality in WA cannot provide levels of pasture production competitive with dryland Victoria then there will be a limited opportunity to sustain profitable dairy businesses in the future.

In addition the WA dairy industry has a higher percentage of farmers who have developed their businesses within a regulated dairy market that provided them higher milk prices as compared to VIC, TAS & NZ farmers. Although this is likely to have resulted in superior cow management skills as evidenced by higher per cow milk production, it would reasonably be interpreted as resulting in their skills not presently being of the same level as their VIC, TAS & NZ counterparts when operating under a lower domestic and/or 'export-based' milk price.

As a result the lower level of performance in WA could at least partially result from this lower level of skill. This could provide an opportunity to improve the performance of the WA dairy industry and increase the overall milk output of WA if this gap in skills can be closed.

However on balance, it could reasonably be concluded that the WA dairy industry is in a relatively sound position to capitalise on increases in milk price. This should lead to a return to moderate growth in milk supply, and potentially result in a period of higher growth if farmers also implement some of the opportunities outlined in this report.

7. PREDICTED GROWTH OF WESTERN AUSTRALIAN DAIRY INDUSTRY

This review of the WA dairy industry would lead to the conclusion that there will shortly be a return to growth in total milk production in WA. Given the amount of milk produced in WA has been comparatively stable over a time of significantly adverse conditions (both environmentally and financially), **it might reasonably be expected to see minimum levels of milk supply growth of 2%-4% per annum over the coming 5-10 years.** This level of growth could be considered as sufficient to sustain present levels of profitability and productivity given that the existing focus on ensuring a comparatively low cost of production is maintained.

The recent increases in milk price, and the predicted continuation of more competitive milk prices as compared to the Eastern States, should lead to a period of "recovery" in milk production in WA. **This could reasonably lead to levels of milk supply growth of 4%-6% per annum over the coming 3-5 years.**

The results of the survey, combined with an interpretation of the financial results of this project, as well as a review of historical growth rates in milk supply in WA, would lead me to conclude that this is the most likely scenario for WA.

There is the potential for WA milk supply to grow more rapidly than suggested above. Should dairy farmers decide to increase stocking rate at a more rapid pace than in recent years, **then this could reasonably lead to a period of 2-3 years of milk supply growth of 5%-10% per annum once the present drought conditions have passed.** These increases to stocking rate are a recommendation to the WA industry as part of this report, as it is likely to result in increases in pasture harvest and improvements in business performance.

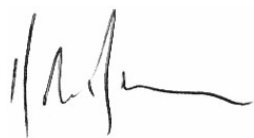
However increasing stocking rate will lead to an increase in business risk. Given the experiences of the past 7 years where there have been major challenges and changes to the WA dairy industry, it might be reasonable to conclude that farmers will be comparatively averse to risk and as a result may choose a conservative pace of change. This makes it additionally difficult to reliably predict the actions of WA dairy farmers as a population.

It must be stressed that predicting the future is an inexact science and there is a large margin for error. It would not be unexpected to have a significant variation to any of the growth rates outlined above, and in particular if environmental conditions or financial conditions vary from what could reasonably be expected. However it is a firm conclusion that growth in WA milk supply will return in the near future, and that this could well be at rates of 4%-6% for an extended period.

It is likely that the number of farms in WA will continue to decrease, though at a much lower rate than has been experienced recently. However farm size will continue to increase when measured in cow numbers and total milk production per farm. More exact predictions on the likely changes to milk supply, cow numbers and farm numbers would require access to more comprehensive data on the WA dairy industry, followed by further analysis of this data.

I trust this report meets your needs. Please let me know if you would like further detail on any of the issues outlined.

Yours faithfully,



David Beca
Director
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