

Farm statistical survey 2020

Dairy Owner/Operator – Irrigated

2020 Farm statistical survey

Produced by Alexanders in association
with Brown Glassford

Background

- The survey data has been taken from the two Practices' clients' actual Financial Statements for the 2020 year. As in previous years, we have combined the survey so that all farm sector groups have a reasonably sound sample size.
- All financial data is GST exclusive.
- Most of the balance dates are 31/3/2020, 31/5/2020 or 30/6/2020.
- The averages referred to are per farm and as per that farm's actual Financial Statements for the 2020 year – the averages are not weighted averages which would produce slightly different data again – as a result of this there is some rounding of data.
- Benchmark. On the right hand side of each survey summary for each sector, we have shown the average figures for the top 10% based on the interest return on total farm capital employed. Figures in the right column are the average of those top farms for each statistic. We could have chosen other benchmarks or several benchmarks but the interest return on total farm capital employed means we can compare farmers with differing levels of debt, scale and production and also make a comparison between sectors. This approach also means we are looking at both the income and expense side of the equation, and the net farm profit, whereas some benchmarks and ratios look at specific areas and issues very well but many are only looking at one side of the equation. We readily acknowledge though that there could be other benchmark approaches equally meaningful.

Key statistics

	Overall Average 2016	Overall Average 2017	Overall Average 2018	Overall Average 2019	Overall Average 2020	Benchmark Group 2020	Your Figures
Average Cows Milked (ACM)	978	1,019	1,061	1,004	896	818	
Average Value of Milk Solid Sales/Kg	\$3.85	\$5.80	\$6.65	\$6.30	\$6.77	\$6.03	
Milk Solids/ ACM (Kg)	448	444	441	455	460	500	
Milk Solids/ EGA (Kg)	1,557	1,486	1,528	1,580	1,591	1,831	
FWE per kg of Milk Solids	\$3.59	\$3.78	\$4.24	\$4.27	\$4.11	\$3.37	
Interest & Rent Paid/KG MS	\$1.29	\$1.35	\$1.34	\$1.23	\$1.09	\$0.97	
Net Farm Profit (Loss)	(\$337,890)	\$365,146	\$555,676	\$414,049	\$735,362	\$1,031,203	
Total Term Debt	\$9,583,996	\$10,818,876	\$10,280,128	\$10,388,863	\$8,951,891	\$6,576,660	
Total Cost of Production per Kg MS	\$5.18	\$5.47	\$5.85	\$5.81	\$5.40	\$4.58	

Key features

1. Average cows milked (ACM) over the five years – 992.
2. Average milk solids production over the five years – 448,192 kg.
3. Average milk solids payout over the five years – \$5.87/kg.
4. Average milk solids production for average cows milked over the five years – 450 kg.
5. Average milk solids production for effective grazing area over the five years – 1,548 kg.
6. Average gross farm income (GFI) over the five years – \$2,866,298.
7. Average farm working expenses (FWE) over the five years – \$1,805,648.
8. Average farm working expenses for kg/ms over the five years – \$4.00/kg.
9. Average interest and rent paid over the five years – \$585,620.
10. Average interest and rent paid for kg/ms over the five years – \$1.26/kg.
11. Average net farm profit over the five years – \$346,469 (Note 1).
12. Average net capital plant purchases over the five years – \$127,456.
13. Average total farm capital employed over the five years – \$18,700,037.
14. Average total term debt over the five years – \$10,004,751.
15. Average total cost of production over the five years – \$5.54/kg/ms.

Note:

1. The average (loss) in the 2016 year was (\$337,890) – if this loss is excluded the average net profit for the four following years was \$517,558.

Key features

When does the benchmark group differ from the 2020 year averages?

1. Higher production for average cows milked by 40 kg – 8.7% higher.
2. Higher production for effective grazing area by 240 kg – 15% higher.
3. Lower farm working expenses for kg/ms by 74 cents/kg – 18% lower.
4. Lower interest and rent payments per kg/ms by 12 cents/kg – 11% lower.
5. Lower TFC by \$3,788,000 – 23.5% lower.
6. Lower total farm debt by \$2,375,000 – 26.5% lower.
7. Lower net capital plant purchases by \$31,676 – 33.7% lower.
8. Higher net farm profit by \$295,841 – 40% higher.
9. Lower total cost of production per kg/ms by 82 cents – 15% lower.
10. Higher personal drawings by \$32,679 – 41.4% higher.

What would an economist say about the 2020 year average net farm profit of \$735,362?

Net farm profit	\$735,362
Plus interest and rent paid	\$472,170
	<hr/>
	\$1,207,532
Less wages of management (say)	(\$140,000)
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Interest surplus return	\$1,067,532
Interest return: $\$1,067,532 \div \$16,102,408 =$	6.62%

Suggested key issues arising from 2020 year:

1. Milk solids production similar over the five years regarding per average cows milked, per effective grazing area and in total kilograms of milk solids.
2. Hard to get the farm working expenses to gross farm income below 60%.
3. Term debt as a percentage of total farm capital at 53% is at top end for banking industry.
4. Average net equity of \$7,151,000 is sound, but needs this strength.
5. Interest and rent paid, at \$1.09 per kilogram of milk solids is soundly low – debt represents \$21.29 per kilogram of milk solids.

Key data for the 2020 year

Average value of milk solids sales (kg) was almost the same

\$6.77

overall

\$6.03

top 10%

Cost of production per kg/ms

\$5.40

overall

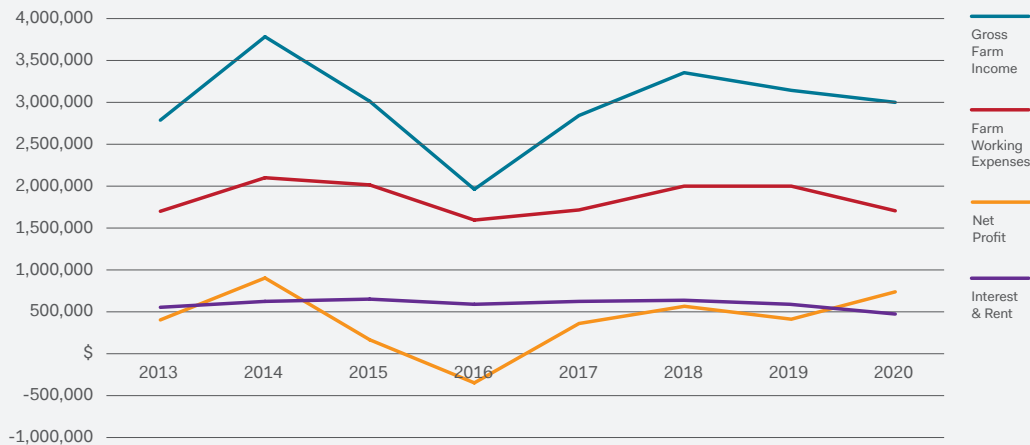
\$4.58

top 10%

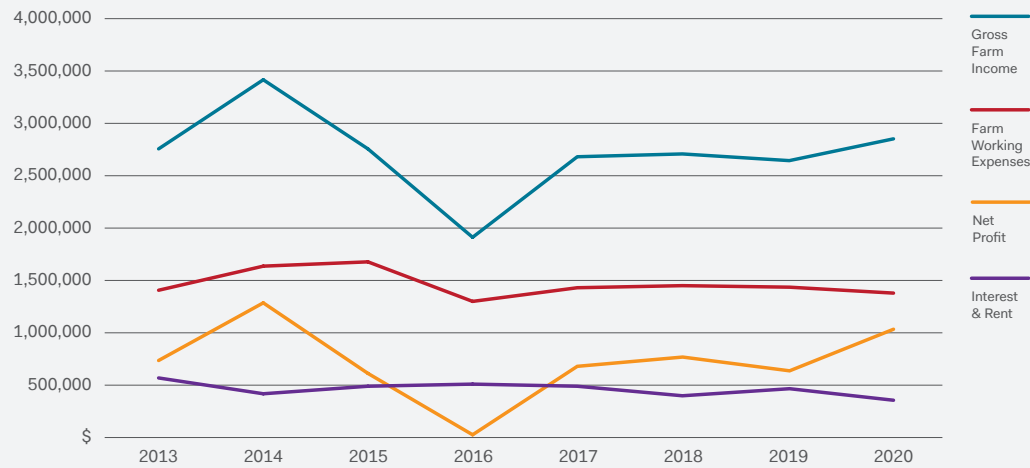
Survey

	Overall Average 2016	Overall Average 2017	Overall Average 2018	Overall Average 2019	Overall Average 2020	Benchmark Group 2020	Your Figures
Effective Grazing Area (ha) (EGA)	276	300	301	287	256	223	
Average Cows Milked (ACM)	978	1,019	1,061	1,004	896	818	
ACM/EGA	3.5	3.4	3.5	3.4	3.5	3.6	
Milk Revenue	\$1,718,698	\$2,617,946	\$3,079,589	\$2,898,485	\$2,825,954	\$2,448,148	
Milk Solids Production (Kg)	436,474	453,118	468,536	462,303	420,527	412,557	
Average Value of Milk Solid Sales/Kg	\$3.85	\$5.80	\$6.65	\$6.30	\$6.77	\$6.03	
Milk Solid Revenue/ACM	\$1,727	\$2,576	\$2,903	\$2,865	\$3,116	\$3,028	
Milk Solid Revenue/EGA	\$5,978	\$8,688	\$10,047	\$9,955	\$10,735	\$11,115	
Milk Solids/ACM (Kg)	448	444	441	455	460	500	
Milk Solids/EGA (Kg)	1,557	1,486	1,528	1,580	1,591	1,831	
Milk Solids as a % of GFI	87.7%	91.5%	92.1%	93%	99%	85%	
Gross Farm Income (GFI)	\$1,972,820	\$2,856,235	\$3,353,269	\$3,152,510	\$2,996,655	\$2,858,585	
Farm Working Expenses (FWE)	\$1,592,845	\$1,718,323	\$2,006,183	\$1,993,547	\$1,717,343	\$1,371,620	
FWE as a % of GFI	81.6%	60.0%	59.3%	62.6%	60.3%	47.6%	
FWE/ACM	\$1,609	\$1,682	\$1,868	\$1,946	\$1,897	\$1,682	
FWE per kg of Milk Solids	\$3.59	\$3.78	\$4.24	\$4.27	\$4.11	\$3.37	
Wages/ACM	\$300	\$288	\$307	\$303	\$308	\$263	
Animal Health/ACM	\$85	\$95	\$102	\$108	\$104	\$74	
Livestock Improvement/ACM	\$48	\$51	\$59	\$64	\$62	\$60	
Stockfood/ACM	\$497	\$470	\$586	\$583	\$578	\$586	
Fertiliser/ACM	\$188	\$194	\$190	\$214	\$202	\$202	
R & M/ACM	\$102	\$118	\$154	\$161	\$142	\$130	
Vehicle Expenses & Fuel/ACM	\$58	\$66	\$64	\$70	\$63	\$52	
Dairy Shed Expenses/ACM	\$18	\$23	\$23	\$19	\$19	\$23	
Interest & Rent Paid	\$590,603	\$627,270	\$645,285	\$592,773	\$472,170	\$354,324	
Interest & Rent Paid as a % of GFI	29.4%	21.4%	18.6%	18.0%	16.1%	13.5%	
Interest & Rent Paid/KG MS	\$1.29	\$1.35	\$1.34	\$1.23	\$1.09	\$0.97	
Cost of Prodn per Kg MS (excl Interest & Rent)	\$3.89	\$4.12	\$4.51	\$4.58	\$4.31	\$3.62	
Net Farm Profit	(\$337,890)	\$365,146	\$555,676	\$414,049	\$735,362	\$1,031,203	
Net Farm Profit as a % of GFI	(17.9%)	13.3%	18.3%	14.8%	25.8%	35.4%	
Net Plant Purchases	\$124,232	\$131,730	\$161,241	\$126,125	\$93,950	\$62,274	
Personal Drawings/Family (excl Allowances)	\$72,980	\$90,475	\$86,067	\$74,416	\$78,858	\$111,537	
Est Total Farm Capital (TFC)	\$17,732,007	\$20,229,820	\$20,656,430	\$18,779,519	\$16,102,408	\$12,314,199	
Est TFC per Kg Milk Solids	\$41.72	\$45.84	\$43.07	\$43.07	\$40.50	\$30.29	
Est TFC per Ha	\$63,200	\$64,108	\$66,719	\$65,354	\$62,334	\$55,458	
Est Interest on TFC	3.5%	4.1%	5.4%	4.7%	6.7%	11.0%	
Total Term Debt	\$9,583,996	\$10,818,876	\$10,280,128	\$10,388,863	\$8,951,891	\$6,576,660	
Term Debt as % TFC	52.3%	52.7%	54.0%	53.0%	53.3%	58.4%	
GFI to Plant Ownership Ratio	3.1	4.4	5.3	5.0	6.1	5.9	
Earnings Before Interest, Rent & Tax (EBIT)	\$250,345	\$991,272	\$1,200,960	\$1,006,821	\$1,207,532	\$1,385,526	
EBIT/ACM	\$241	\$976	\$1,170	\$1,016	\$1,333	\$1,709	
EBIT/EGA	\$827	\$3,262	\$4,035	\$3,502	\$4,603	\$6,225	
EBIT/Kg Milk Solids	\$0.53	\$2.19	\$2.66	\$2.24	\$2.90	\$3.40	
Net Profit / Kg Milk Solids	(\$0.75)	\$0.85	\$1.32	\$1.01	\$1.82	\$2.43	
Total Cost of Production per Kg MS	\$5.18	\$5.47	\$5.85	\$5.81	\$5.40	\$4.58	
MS Margin over and above MS Payout (/Kg MS)	(\$1.33)	\$0.33	\$0.55	\$0.49	\$1.38	\$1.44	
"Misery Index"	111%	81%	78%	81%	76%	61%	

Average GFI, FWE, Interest + Rent & Net Profit 2013–2020



Benchmark GFI, FWE, Interest + Rent & Net Profit 2013–2020



Interest/Rent paid per kg/ms

\$1.09 overall
\$0.97 top 10%

Farm working expenses per kg/ms

\$4.11 overall
\$3.37 top 10%

Glossary

SU	Stock Units (or Ewe Equivalents).
GFI	Gross Farm Income.
FWE	Farm Working Expenses.
Personal Drawings (excluding allowances)	Personal Drawings but excluding: <ul style="list-style-type: none">Life AssurancePersonal InsurancesSuperannuationTaxationPersonal Insurance, Electricity & Car AllowancesSchool FeesHealth & Sickness InsurancePersonal ACC Levies.
Net Plant Purchases	Gross Capital Plant Purchases less Capital Plant Sales/Trade-ins.
TFC	Estimated Total Farm Capital Employed in the farming operation in the form of Land, Stock & All Plant (+ Dairy Shares where relevant).
EGA	Effective Grazing or Milking Area (in hectares).
ACM	Average Cows Milked (usually taken at or around early to mid January each year).
MS (kg)	Milk Solids (kg).
EBIT	Gross Earnings before interest and tax = Gross Farm Income less all expenses except Interest and/or Rent and Income Tax.
Net Farm Profit	True Net Farm Profit (calculated after allowing for and adjusting for any livestock number and class number changes and being reflected at the current year's Herd Scheme Values and after deducting FWE, interest, rent and depreciation).
GFI to Plant Ownership	The relationship of the Gross Farm Income to the book value of plant at year's end. The lower the number the more the exercise has excess plant or insufficient GFI or a combination of the two.
Total Term Debt	Includes all external debt and family debt. Some family debt may involve a low to nil interest cost.
Interest Earned on Total Farm Capital Employed (TFC)	The net farm profit plus added back interest and/or rent paid less a wages of management figure for one or both spouses as is appropriate, divided by the estimated value of the total assets employed re land, buildings, stock and plant. Where land is rented from external parties its value in general is not included in the TFC.
Farm Sector Groups	It is fair comment that some farms could fit either in whole or in part into several different farm sector groups but this would generally only apply to about 5% of the total. The comment applies to several downlands and several hill country farms.
'Misery Index'	The sum of the FWE to GFI ratio and the interest and/or rent paid to GFI ratio. Where the sum is above 80% unless the scale is significant it almost invariably means trouble because it could well mean that more than one key benchmark is being broken at any one point in time.
BG	Benchmark Group.



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