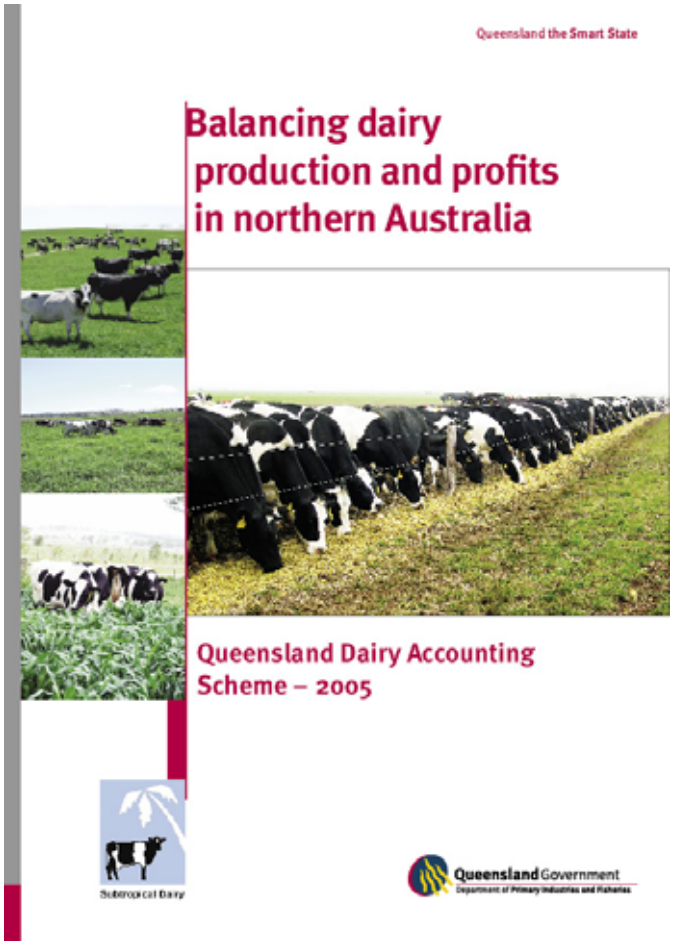
Queensland Dairy Accounting Scheme Financial and production trends - 2005

Northern New South Wales summary



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Queensland dairy accounting scheme (QDAS) collected the physical and financial data from 157 farms and includes data from all dairy regions in Queensland and northern New South Wales.

This report provides a summary of the data collected in 2004-05 and trends in indicators. It must be noted that participation in QDAS is voluntary and therefore results and trends will need to be interpreted carefully.

A copy of the **full QDAS report** can be found at www.dairyinfo.biz
For more information on QDAS contact Graeme Busby on 07 4688 1254 or Ross Itzstein on 07 54 304911.

Queensland Government
Department of Primary Industries and Fisheries

Introduction

This summary reports on data from collated from 157 farms located in all dairy regions of Queensland and northern New South Wales. The farms in northern New South Wales have production systems similar to those of coastal dairy farms in South East Queensland. For the purpose of the report, the area is called the Northern Australia dairy region. The area is covered by the Subtropical Dairy Group Limited. It is estimated that the region produced approximately 771 million litres of milk from 1,120 farms in 2004–2005.

Participation in the Queensland dairy accounting scheme (QDAS) is voluntary; results and trends need to be interpreted carefully as QDAS farms have larger herds and produce significantly more milk per farm.

Summary of the 2005 QDAS results

- In Queensland, the average herd size is stable at 179 cows per farm but in NNSW, farms have continued to increase their herd numbers. In NQ and CQ, production per cow increased significantly.
- Operating profit margin (OPM) expressed per cow and as a percentage of income has been included on profit maps this year. These indicators show the profits generated irrespective of farm and herd size. The top 25 percent had an OPM per cow of $602.
- The average cash cost of production was 38.0 cents per litre whereas top farms produced milk for 35.0 cents per litre. This cash cost included a living allowance of $45,000. The top farms generated higher cash surpluses through higher cattle sales, higher production per cow and lower variable costs.
- Across Northern Australia there are quite marked differences in milk returns and gross margins. Even so, there were very successful farmers in all regions.
- Major differences between farms can be identified in the following areas – production per cow, fertiliser use, size of operations and home–grown feed utilisation. The top 25 percent of farms (when compared to the remaining 75%) had
    - Higher per cow production (+665 litres).
    - Higher margin over feed related costs (+$455) even through the feed costs per cow were similar.
    - More milk produced from pasture (61 compared to 55 percent).
- Farms with cows producing 6,000-7,000 litres had a high margin over feed costs per cow ($1,056), a high gross margin per farm ($129,403) and a high dairy operating profit at $348 per cow.
- Farms producing in excess of 1.25 million litres recorded higher production per cow (>5,800 litres), higher margins, and higher labour use efficiency (milking almost 100 cows per labour unit) then farms producing less than 1.25 million litres.
- In all regions, farms with highest production from pastures had the highest dairy operating profit per cow.
- In high rainfall areas, farms in the high nitrogen fertiliser group (average 141 units of nitrogen per cow) had the highest gross margin and litres produced from low–cost pasture. Optimum fertiliser use combined with higher stocking rates has always proven to be economical.
- Land accounts for 72 percent of the total asset with livestock making up just 11 percent of the asset value. The high land prices contribute to net worth but impact negatively on the return on asset calculation. For this reason, a range of KPI should be used to monitor business performance.
- Only small savings in overhead costs per litre (0.5 to 1.0 cent) are evident as production increases.

Drivers of farm production and profitability

Increasing production per cow

The detailed operational costs obtained from farmers has provided information that consistently shows that as you improve a cow's diet, thereby utilising her genetic potential, you increase the margin over feed costs and the gross margin per cow and per farm. QDAS found that the group of surveyed farms who produced 6-7,000 litres per cow had the highest dairy operating profit per cow at $348. The margin over feed costs increased from $565 (for the <4000L group) to $1,056 (for the 6-7,000L group). The group of farms over 7,000 litres had high margins but could not translate this into a profit per cow. The significance of this is inconclusive due the small number of farms in this group.

Production group	<4,000 L	4-5,000 L	5-6,000 L	6-7,000 L	>7,000 L
Annual production (L)	490,490	846,752	957,255	1,144,568	1,633,061
Herd size	148	188	174	181	222
Margin over FRC (c/L)	17.0	16.9	18.8	16.7	16.0
Margin over FRC/cow ($)	565	761	1,029	1,056	1,179
Gross margin/farm ($)	53,530	96,125	125,806	129,403	178,704
DOP ($/cow)	94	239	273	348	171

Increasing herd size

More cows managed effectively, increase milk sales but does this lead to more profit? 2004-05 data shows that surveyed farms producing over two million litres had higher production per cow, and while the gross margin per cow tapers off, the gross margin per farm increases. Dairy operating profit per cow was also highest on the large farms. Litres per labour unit on the largest farms was just over 500,000 litres. This equates to 80 cows per labour unit.

	<750,000 L	750,000 – 1.25mil L	1.25 – 2.0mil L	>2.0mil L
Herd Size	117	180	273	386
Production per cow (L)	4,451	5,244	5,878	6,341
Margin over feed /cow ($)	770	947	1,004	1,055
Gross Margin/farm ($)	58,114	117,699	195,494	265,096
DOP ($/cow)	25,418	41,977	68,317	135,876

Optimising milk production from home grown feed

Past reports and research have shown that optimising utilisation of home grown feed (HGF) can control feed related costs and improve gross margins. Farms with high paddock feed utilisation can also maintain acceptable individual cow production. 2004-05 data again shows that farms with low variable cost had the highest litres from home grown feeds. Furthermore, farms with the highest production from pastures had the highest dairy operating profit (DOP) per cow.

Region	TVC < 22.2 c/L		TVC > 22.2 c/L	
NNSW	**Litres/cow from HGF**	**DOP ($/cow)**	**Litres/cow from HGF**	**DOP ($/cow)**
	11.4	252	10.6	75

Strategic nitrogen fertiliser application

As nitrogen fertiliser use per cow increases we have higher production per cow, higher gross margins per farm and more milk produced from home grown feed. In high rainfall areas, the high user group averaged 141 kgs N per cow. The table shows the result in production per cow, and gross margin.

Units of N per cow (kg)	32 (Low)	84 (Medium)	141 (High)
Production per cow (L)	4,574	5,305	6,041
Gross margin per farm ($)	97,807	121,546	138,704
Litres from HGF	397,454	504,286	772,003

Increasing the stocking rate

- In the high rainfall area, as stocking rate increases from 1.5 to 4.1 cows per hectare the milk produced increases from 6,984 litres to 20,803 litres per hectare. Farm gross margin rose from $85,191 at 1.5 cows to $140,716 at 2.4 cows per hectare. When stocking rates increased, the milk produced rose but the margins were lower, suggesting that the optimum stocking rate was exceeded.
- In the low rainfall areas, as stocking rate increases from 0.5 to 2.4 cows per hectare the milk produced increases from 2,748 litres to 13,931 litres per hectare. Farm gross margin rose from $79,670 to $142,600.

Northern New South Wales trends

Participation in QDAS is voluntary so the farm data collated is not a random sample of industry data. In fact, the average QDAS farm produces 263,000 litres of milk more annually than the average north Australian dairy farm. From the cooperating group in northern Australia in 2005, 85 farms have a minimum **four years past data**. To highlight the real trends on this group since deregulation their data is shown in tables below.

- Annual farm production over the period increased by 24 percent to 1 277 256 litres.
- The additional production was achieved by a herd increase of 33 milkers and per cow production rose by 325 litres to 5602 litres.
- Total variable costs increased by 2.8 cents per litre resulting in reduced operating profits.
- Land values increased in all areas. While the cash position, as measured by additional debt repayment capacity remains tight for many farmers, the higher land values will be reflected by an improvement in net worth on the balance sheet.

The table below shows the regional trends in KPI over four years in NNSW, (2002 to 2005)

	2001-2002	**2002-2003**	**2003-2004**	**2004-2005**
Total milk income (c/L)	35.1	36.4	35.3	35.2
Average herd size	195	222	214	228
PPC (L)	5277	5352	5650	5602
FRC (c/L)	17.7	21.0	16.6	19.2
TVC (c/L)	22.2	25.4	22.7	25.0
DOP ($/cow)	461	282	255	120

Dairy accounting scheme

Group cash gross margin

NNSW Farms

Period ending 6/2005

Income		Cents/litre	Dollars/cow	Total $ earned
Milk		34.5	1,780.5	345,685
Milk bonuses/incentives/rebates/other		0.0	4.4	870
Milk income	(999513 l)	**34.6**	**1,785.0**	**346,556**
Stock sales - dairy		3.6	186.7	36,246
Stock sales - other		0.0	0.0	0
Produce sales		0.1	8.2	1,608
Other income		2.0	103.7	20,137
Non-milk income		**5.8**	**298.7**	**57,993**
Total farm income		**40.4**	**2,083.7**	**404,549**

Production costs	Cents/litre	Dollars/cow	% Milk income	Total $ spent
Purchased feeds	12.0	620.6	34.7	120,492
Fertiliser	2.4	128.6	7.2	24,969
Fuel & oil	1.3	70.7	3.9	13,730
Seed	1.4	72.9	4.0	14,169
Irrigation costs	0.2	12.5	0.7	2,429
Other feed costs	1.7	90.2	5.0	17,523
Feed related costs	**19.3**	**995.7**	**55.7**	**193,315**
Margin over feed related costs	**15.3**	**789.3**	**44.2**	**153,240**
Heifer feeds	0.4	22.6	1.2	4,401
Animal health	0.5	28.2	1.5	5,479
Herd improvement	0.5	26.4	1.4	5,142
Herd costs	**1.5**	**77.3**	**4.3**	**15,023**
Dairy shed costs - electricity	0.7	37.8	2.1	7,344
Dairy shed costs - chemicals	0.7	38.5	2.1	7,487
Shed costs	**1.4**	**76.3**	**4.2**	**14,832**
Cartage	0.4	24.0	1.3	4,662
Levies	0.3	16.9	0.9	3,282
Repairs & maintenance	1.8	96.4	5.4	18,721
Sundry variable costs	0.2	15.2	0.8	2,963
Other variable costs	**2.9**	**152.6**	**8.5**	**29,630**
Total variable costs	**25.2**	**1,302.1**	**72.9**	**252,801**
Gross margins: milk only	**9.3**	**482.9**	**27.0**	**93,754**
whole farm	**15.1**	**781.6**	**43.7**	**151,747**
Permanent wages	3.2	167.5	9.3	32,537
Personal drawings etc	3.0	159.0	8.9	30,874

Labour inputs		Areas (ha)		Stock		Production		
Permanent unpaid	1.3	Milking cow	93	Milking cows	182	Fed to calves (l)	21445	2%
Permanent paid	1.1	Effective dairy	174	Dry cows	11	Protein total (kg)	32510	3.22%
Casual paid	0.0	Agistment	0.3	Heifers 15+	57	Butterfat total (kg)	39357	3.85%
		Winter irrigation	24	Heifers <15	79	Total solids (kg)	71868	
		Summer irrigation	21	Adult equivalents	264	Litres / cow	5148	
						Total solids / cow (kg)	370	

Farms in report 35

Total Operating Costs	$383,104
Dairy Operating Surplus (EBIT)	$20,880
ROA	1.2%
Asset value	$1,757,013
Equity	78%

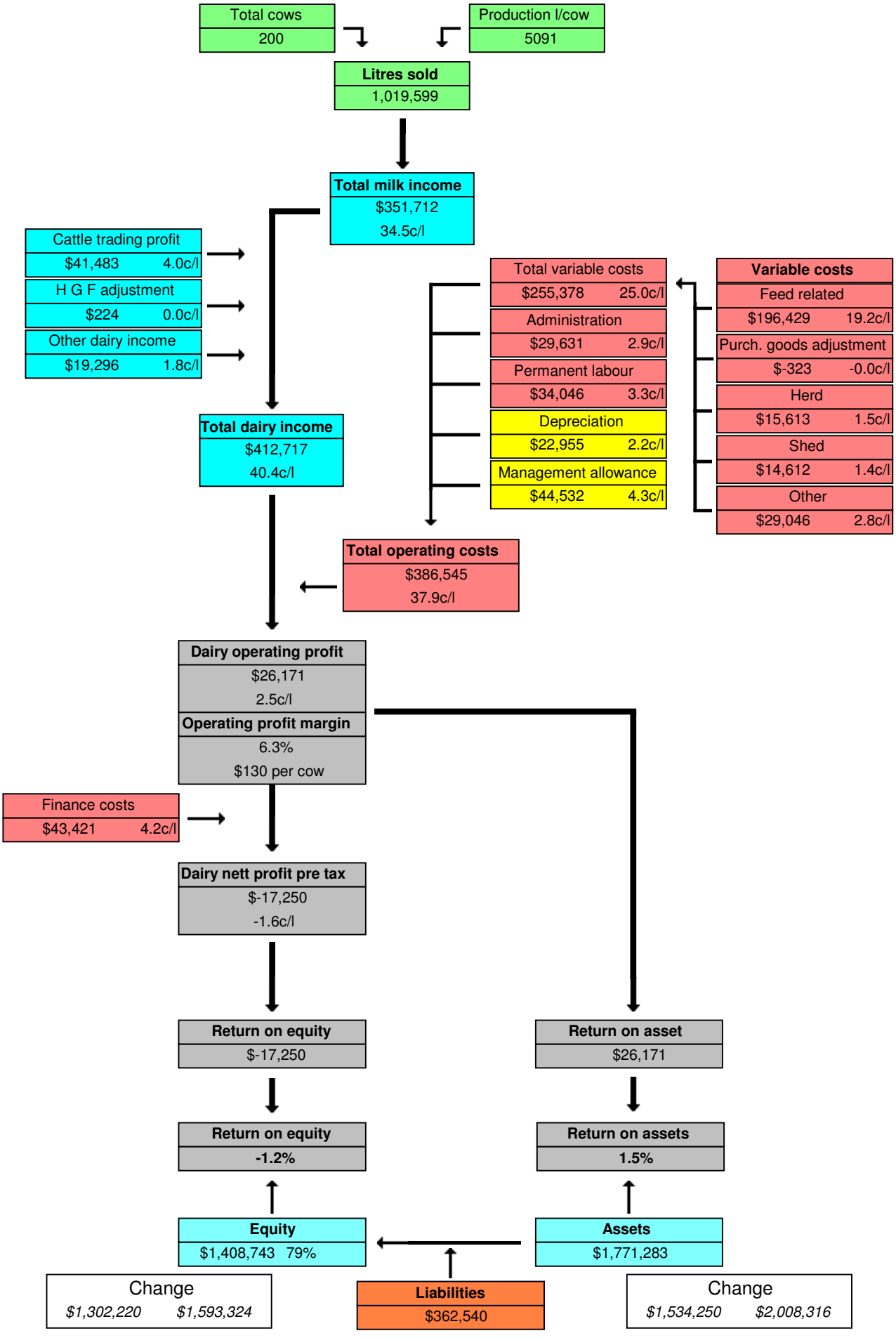
Dairy accounting scheme

Group dairy farm profit map

NNSW

Group of 40 farms

Year 2005



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Asset and liability values are the average of opening and closing values for this year

Note: Management allowance is calculated

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