Producer adjustment to policy reform:

A case study on the

Australian dairy industry

by

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Introduction

Policy reform has been a significant source of adjustment pressures in Australian agriculture. In recent times several industries have been adjusting to trade liberalisation measures and/or changes to domestic support arrangements. For producers the initial effect is reduced net returns and lower incomes. It creates pressure for adjustment and often leads to industry requests for assistance to manage the impact of the reform.

Overseas policy makers have concerns about the producer impact of policy reform in highly supported industries. Deregulation of the Australian dairy market provides an opportunity to observe how an industry adjusts to a major policy reform. The paper focuses on the response of dairy farmers to the effects of deregulation and government assistance measures. It is part of a RIRDC project that is reviewing selected Australian experiences on the impact of policy reform and the provision of industry adjustment assistance.

Australian dairy policy has a long history of providing income support for producers through a variety of regulatory arrangements. In July 2000 a major policy reform was completed with the elimination of all dairy price support mechanisms. Australia became one of the few dairy-producing countries to link producer returns to the world market.

Policy reforms in 1986 – the start of dairy deregulation

Until recently a national market for dairy products did not exist. Government regulations created an artificial market separation between fluid milk sales and milk used for manufactured dairy products. State Governments had established six separate markets for fluid milk. Interstate trade in fresh milk was effectively precluded despite the apparent contravention of Section 92 of the Constitution which guarantees free trade between the States.

Deregulation of the Australian dairy industry began with a set of policy reforms introduced in July 1986. The *Kerin Plan* focused on reforming marketing arrangements in the manufacturing milk sector. The system of pooling export returns was abolished. In future manufacturers would receive the prevailing world price for their exports of each product. They would also receive a *Market Support Payment* (MSP) funded by a farmer levy on all milk production.

The revised policy arrangements encouraged manufacturers to charge higher prices for dairy product sales on the domestic market. The net effect was to raise the price of manufacturing milk above export parity. However, the *Kerin Plan* was designed to gradually reduce the level of assistance for dairy producers over several years. The phased reduction in support gave farmers time to adjust to the impact on farm incomes.

The Commonwealth Government decided to continue reducing industry assistance when the *Kerin Plan* was replaced with the *Crean Plan* in 1992. Underwriting of export returns was abolished and a maximum allowable level of support was established based on export parity prices. The new plan specified annual reductions in support to a level of 10% of the average export price by the year 2000. The combined policy reforms delivered a reduction in average support levels from around 40% in 1987 to 13% by 1995.

In 1995 the support arrangements had to be re-designed in response to a WTO interpretation of the *Crean Plan*. The central element of the scheme – *Market Support Payments* – involved a payment on exports. The policy was classed as a domestic support measure and an export subsidy scheme. The *Domestic Market Support Scheme* (DMS) was introduced and it removed the linkage of support payments to export sales.

The domestic levy arrangements that funded the market support payments were altered. A *Market Milk Levy* of 2c/litre was imposed on sales of drinking milk. The *Domestic Manufacturing Milk Levy* applied to milk used for dairy products sold on the domestic market. This levy was initially set to approximate the benefit provided by the *Crean Plan* in 1995. Manufacturers were expected to pass on the cost of the levy to domestic consumers and generate an equivalent price premium. The combined levy revenue funded a DMS payment to manufacturing milk producers.

Initial reform of the market milk arrangements

During the 1990s a number of reforms were made to the market milk arrangements by State Governments. In general the regulatory changes involved deregulating the post farm gate marketing arrangements. Pricing controls on wholesalers, vendors and retailers were removed. Restrictions on trading zones for individual processors and vendors were eliminated.

There was no coordinated approach by the State Governments to the content and timing of the reforms. Reforms were announced several years before they were introduced. Processors and vendors had time to prepare for deregulation. NSW, Queensland and Western Australia established adjustment schemes to manage the impact of deregulation on milk vendors.

Post farm gate deregulation created an incentive for processors to introduce product innovations and invest in brand based promotion. Marketing margins increased and retail prices rose as the cost of marketing initiatives were greater than cost reductions from supply chain efficiencies. The reaction of processors to deregulation was not surprising as consumer demand for milk is not highly responsive to price changes.

Industry adjustment on the road to deregulation

There was considerable industry adjustment during the lead up to the introduction of the *Kerin Plan*. A large number of producers had exited the industry. In the ten years to 1984-85 farm numbers fell by 11,288 farms (table 1) and milk production declined. The adjustment reflected a period of relatively low returns in the late 1970s caused by reduced export opportunities.

From the mid 1980's the industry became progressively more focused on exports and milk production increased. Structural adjustment continued as producers responded to fluctuating world prices and policy reforms contained in the industry plans. The pressure for adjustment was especially evident in the manufacturing milk sector. By June 2000 the industry was composed of 12,888 dairy farms – 6,454 farms had left the industry since 1984-85, a decline of 33%.

During this period producers faced continual adjustments to market developments. Export returns were weakened by restricted access to the major world markets and large volumes of subsidised exports. In some years this had a substantial impact on producer returns. Competition on the domestic market from New Zealand imports increased following the signing of the CER trade agreement (ANZCERTA).

The adjustment has involved resource movements out of the industry and on-farm developments that improved the producer competitiveness. Some of the livestock and land resources of those exiting the industry were purchased by those who remained in the industry. In other cases land was directed into other agricultural industries or purchased for non-agricultural uses.

1 Pre-deregulation adjustment in the number of Australian dairy farms

Year ending 30 June		1974-75	1979-80	1984-85	1989-90	1994-95	1999-00
Victoria	*number*	14 920	11 467	10 850	8 840	8 379	7 806
	change	..	-3 453	- 617	-2 010	- 461	- 573
NSW	*number*	4 834	3 601	2 838	2 220	1 911	1 725
	change	..	-1 233	- 763	- 618	- 309	- 186
Queensland	*number*	4 622	3 052	2 544	1 970	1 746	1 545
	change	..	-1 570	- 508	- 574	- 224	- 201
Australia	*number*	30 630	21 994	19 342	15 396	14 166	12 888
	change	..	-8 636	-2 652	-3 946	-1 230	-1 278

Source: Dairy Australia, Australian Dairy Industry in Focus 2003.

Producers adjusted by increasing their scale of operations and improving farm productivity. The rate of change accelerated after 1984-85. Average herd sizes and milk output per farm increased considerably (table 2). Some farmers increased their land base to accommodate a larger herd. In other cases the pasture base was developed to improve the productive capacity of the farm.

There were on-going improvements in livestock productivity. In 1984-85 average milk yields were 3,340 litres/cow. By 1999-00 milk yields had increased to almost 5,000 litres/cow. The change reflects improvement in pasture quality, greater used of supplementary feeds and genetic improvements in cow herds.

Pressures for further policy reform

Commonwealth legislation for the *DMS Scheme* was due to terminate in June 2000. Deregulation of the manufacturing milk sector would have implications for the market milk regulations. There were a number of pressures for further policy reform in the lead up to deregulation:

- The risk of a WTO challenge to the *DMS Scheme* if it continued beyond June 2000. The scheme had not been challenged possibly because other countries operated schemes which had a similar effect of subsidising export supply growth.

- Increased competition from imports limited the ability of manufacturers to gain higher prices on the domestic market. The support arrangements created an incentive for New Zealand to exports to Australia because domestic prices were above export parity.

- Legal opinions questioning the constitutional validity of the market milk regulations under Section 92 of the Constitution. Termination of the *DMS Scheme* and commercial pressures beyond the farm gate would increase the risk a legal challenge after June 2000.

- Commercial pressures from national supermarket chains for unrestricted interstate milk sales. Milk processors were facing increased demands for a national pricing structure for home brand milk contracts and a national sourcing/distribution system for milk.

- State Government reviews of market milk regulations under the National Competition Policy (NCP) regulatory review process. Farm gate price controls could only continue if the regulations passed a ‘public benefit’ test.

2 Farm level adjustment on the road to Australian dairy deregulation

Year ending 30 June		1974-75	1979-80	1984-85	1989-90	1994-95	1999-00
Average milk output per farm							
Victoria	'000 litres	251	275	324	428	610	880
	% change		9.5	17.9	32.2	42.5	44.2
NSW	'000 litres	198	252	331	396	569	809
	% change		27.0	31.5	19.5	43.7	42.2
Queensland	'000 litres	143	166	242	319	424	549
	% change		16.7	45.5	31.9	32.7	29.6
Australia	'000 litres	212	247	312	407	579	842
	% change		16.5	26.3	30.4	42.4	45.3
Average herd size per farm							
Victoria	head	85	91	95	110	133	176
	% change		7.1	4.8	14.7	21.3	32.8
NSW	head	80	86	97	107	120	168
	% change		7.9	11.8	11.0	12.3	39.2
Queensland	head	71	81	90	102	108	126
	% change		13.7	11.2	13.3	6.1	16.6
Australia	head	77	85	93	107	129	168
	% change		11.2	9.4	14.9	19.7	31.0
Average milk yield per cow							
Victoria	litres/head	2 951	3 015	3 394	3 912	4 595	4 989
	% change		2.2	12.6	15.3	17.4	8.6
NSW	head	2 478	2 916	3 431	3 693	4 726	4 826
	% change		17.7	17.6	7.7	28.0	2.1
Queensland	head	2 003	2 057	2 690	3 129	3 915	4 351
	% change		2.7	30.8	16.3	25.1	11.1
Australia	head	2 758	2 889	3 337	3 786	4 504	4 996
	% change		4.7	15.5	13.5	19.0	10.9

Source: Dairy Australia, Australian Dairy Industry in Focus 2003.

The NCP review process was the key pressure point for deregulation. All reviews had to be completed by the year 2000. Several state reviews concluded there was a net public benefit in the regulation of market milk prices. In 1998 NSW and Queensland announced an extension of farm gate price controls until 2003 subject to any changes in the Victorian regulations.

The Victorian NCP review was completed in mid 1999 and found there was no net benefit from the market milk regulations. The Victorian industry supported the findings and the Government decided to terminate farm gate price controls on 1 July 2000. Following a change of Government Victorian producers were asked to vote on the decision to deregulate. A December 1999 poll found 89% in favour of deregulation with a voter participation rate of around 85%.

Deregulation of the Australian dairy industry

In the lead-up to the Victorian NCP review the peak producer body, the Australian Dairy Industry Council (ADIC), decided that if deregulation was going to occur it was essential to have an orderly transition. After considerable discussion the ADIC decided to support full deregulation of the dairy market in conjunction with adjustment assistance to manage the impact on producers.

The ADIC proposal was to simultaneously end all state market milk regulations and the *DMS Scheme* on 1 July 2000. There would be no transition period for phasing out price support. The ADIC decided this was not a realistic option because of the difficulty in coordinating separate political processes across seven Governments. The ADIC developed a proposal for adjustment assistance and approached the Commonwealth Government for support.

In September 1999 the Government announced a $1.78 billion industry restructuring package as part of the industry proposal to deregulate. However, the package would only be implemented if all State Governments had repealed their market milk regulations by 1 July 2000. The package was designed to provide transitional assistance to manage the reduction in farmer incomes that was expected to follow deregulation. The package had three components:

- a Dairy Structural Adjustment Program (DSAP) of transition assistance for all producers;
- a voluntary Dairy Exit Program (DEP) to assist farmers exiting the industry; and
- a Dairy Regional Adjustment Program to manage the impact on dairy communities.

The package was funded by a *Dairy Adjustment Levy* of 11c/litre on domestic sales of fresh milk. The levy rate was established to achieve an immediate reduction in retail prices and limit the package repayment period. The market milk premium was estimated to be 20-25 c/litre at the time of deregulation. The levy was expected to allow retail prices to fall by at least 10 c/litre and remain in place for around 8 years.

DSAP - adjustment assistance for producers

The *DSAP scheme* – worth around A$1.63 billion – involved payments that reflected assistance obtained individual farmers from the two sets of regulations. The assistance was calculated to approximate the loss of income that would occur in the first three years of deregulation. Payments were fixed and based on milk produced in the 1998-99 season.

The *DSAP scheme* had two payment components – 46.23 c/litre for market milk and 8.96 c/litre for manufacturing milk. The decline in prices and associated adjustment pressures were expected to be greater for market milk producers. DSAP payments were considerably higher in states where drinking milk accounted for a high proportion of farm output (table 3). Individual payments were capped at $350,000 and treated as income for tax purposes.

WTO commitments for AMS reductions from the Uruguay Round did not allow the assistance to be paid as a single payment. The total entitlement was divided into 32 quarterly installments and a fixed payment right was issued for an eight year period commencing in 2000-01.

DSAP eligibility was conditional on the completion of a Farm Business Assessment (FBA). This requirement was imposed to ensure all producers considered the consequences of deregulation for the viability of their farm business. The sudden impact of deregulation would require longer term decisions about adjusting to change in market conditions.

The ADIC invited financial institutions to develop a facility that could convert the quarterly entitlements into an up-front payment. The *DSAP scheme* had created a fixed stream of government guaranteed payments. The aim of the facility was to enable farmers to obtain the discounted present value of their entitlements by borrowing a lump-sum against the security of their assistance payments.

3 DSAP producer adjustment assistance for Australian dairy deregulation

		Market milk	Manufacturing milk	Total
Average DSAP payment per farm ^				
NSW	*$'000*	160	36	196
Queensland	*$'000*	117	25	142
Western Australia	*$'000*	216	46	262
Victoria	*$'000*	30	68	98
Tasmania	*$'000*	37	67	103
South Australia	*$'000*	129	62	191
Australia	*$'000*	69	57	127

^ Based on estimated DSAP payments for each State. *Source: Dairy Australia, private communication.*
State DSAP payments estimated from 1998-99 milk production & DSAP payment rates.
Per farm calculation based on the number of registered dairy as at 30 June 2000.

The availability of a single payment improved the flexibility of the assistance program. Most producers made the conversion to an up-front payment. It encouraged many farmers to consider options for substantive farm developments that would improve their viability. In other cases it has encouraged debt reduction and financing income diversification activities.

DEP - exit assistance for producers

Producers who decided to leave the industry could apply for exit assistance under the Dairy Exit Program (DEP). The maximum value of exit assistance was a tax-free lump sum of $45,000. It was a voluntary program and successful applicants gave up their right to a DSAP grant. Producers planning to retire could do so with either a DSAP grant or a DEP payment.

Eligibility was subject to an assets test and acceptance of a DEP payment required producers to sell their dairy farm and withdraw from agricultural production for 5 years. These conditions limited the attractiveness of the program as some producers intended switching into other agricultural pursuits. When the program closed there were around 120 DEP recipients.

Supplementary adjustment assistance

In late 2000 an ABARE assessment of the initial impact of deregulation showed a substantial reduction in market milk prices. The impact on manufacturing milk producers had been less severe – adjustment pressures had been cushioned by higher world prices. The Government introduced the *Supplementary Dairy Adjustment* (SDA) package targeted at market milk producers. The package was funded by extending the milk tax and included:

- $120 million in *Additional Market Milk* (AMM) payments;
- $20 million for DSAP discretionary payments to producers who were re-assessed; and
- an extra $20 million to extend the DRAP scheme for regional adjustment assistance.

AMM payments were based on a sliding scale of the percentage of output directed to the market milk sector in 1998-99. Eligibility criteria effectively excluded manufacturing milk producers from the AMM payments. The extra payments were capped at $60,000 per dairy enterprise and treated as taxable income. Producers had the option of taking the extra assistance as a lump-sum payment or as quarterly installments over the same 8 year period.

4 Adjustment in the Australian dairy industry since deregulation

Year ending 30 June	**Number of dairy farms**			**Milk production**		**Production per farm**	
	number	*change*	*% change*	*m litres*	*% change*	*'000 litres*	*% change*
1998-99	13 156	- 322	*-2.4*	10 179	*7.8*	774	*10.5*
1999-00	12 888	- 268	*-2.0*	10 847	*6.6*	842	*8.8*
2000-01 *	**11 837**	**-1 051**	***-8.2***	**10 547**	***-2.8***	**891**	***5.9***
2001-02	11 048	- 789	*-6.7*	11 271	*6.9*	1 020	*14.5*
2002-03 ^ p	10 654	- 394	*-3.6*	10 326	*-8.4*	969	*-5.0*

* Poor season and deregulation on 1 July. *Source: Dairy Australia, Australian Dairy Industry in Focus 2003.*

^ Widespread drought conditions.

p - provisional

Industry adjustment since deregulation

Deregulation accelerated the industry adjustment process that had been evident for some time. More than a thousand farmers retired in the first year (table 4). After three years 2,234 farms have left the industry, a decline of 17%. Adjustment pressures have affected both manufacturing and market milk producers. In Victoria 1,005 producers have left the industry over the past three years. This compares with 435 retirements in NSW and 420 in Queensland.

Milk production declined in the first year of deregulation. Poor seasonal conditions contributed to the decline but farmer retirements in the market milk regions also played a role. Milk production in NSW and Queensland declined by 7%. Much of the decline can be attributed to a reduction in farm numbers, down 19% in NSW and 16% in Queensland. The initial impact of deregulation was smaller in Victoria where farm numbers fell by 3% and production declined by 1%.

Milk production recovered in 2001-02 and increased in all states except Queensland. There were further farmer retirements but the rate of the adjustment in the market milk regions declined. Adjustment accelerated in Victoria with farm numbers down by 6.4%, well above the average retirement rate of 1.2% during the 1990's. The increased exit rate occurred despite good seasonal conditions and strong prices for manufacturing milk. Improved farm asset values and the DSAP grant may have encouraged some farmers to take the opportunity to leave the industry.

In 2002-03 milk production declined again (-8%) but this largely reflects the widespread drought conditions that affected all dairying regions. The impact of deregulation may have been a factor although farm retirements in NSW and Queensland fell to around 2%. Further adjustment was evident in the manufacturing milk regions with a farm exit rate of almost 4%. Poor seasonal conditions and weaker export prices were probably the major contributing factors.

Producers who remained in that industry at the end of 2002-03 have made significant adjustments to their farming operations in response to deregulation. To off-set the decline in farm income producers have increased milk production. Output per farm increased by 6% in 2000-01 and almost 14% in 2001-02. The improved farm productivity was evident in all dairying regions.

Growth in production has been driven by a combination of expanding the scale of operations and improving the productive performance of the primary inputs – land and livestock. Average herd sizes have increased and some producers have purchased land. Feed inputs have also improved – feed supplements, pasture development, etc – as the milk yield of cows and land has increased.

Producer response to dairy deregulation

Producers have make adjustments to improve their financial situation in response to deregulation. To verify the capacity for change a survey of dairy farmers was commissioned in late 2003 to examine the on-farm adjustments that have occurred. The survey covered four regions – northern NSW, south-east Queensland, northern Victoria and western Victoria. It was designed to provide a representative cross-section of the adjustment by manufacturing and market milk producers.

The survey covered 219 farms and was designed to compliment the ABARE regional survey data on financial performance (table 5). In some cases the adjustment decisions may not have been a specific response to the impact of deregulation. For example, the widespread drought in 2002-03 has forced dairy farmers to cope with additional adjustment pressures. The survey questions were designed to try and reveal the reasons behind recent changes in farm management.

For many producers the response involved changes to increase milk production from an existing base of farm resources (ie land and capital). Survey results indicate that 45% of producers have increased their herds since deregulation (table 6). Deregulation was a major factor in herd expansion in the market milk regions. More than 80% of the producers who expanded their cow herds indicated the decision was at least partially due to deregulation. In the Victorian regions less than 25% of the producers with larger herds cited deregulation as a factor in their decision.

Carrying capacity and drought conditions were a constraint on herd expansion decisions. Seasonal conditions were poor in 2000-01 and there was a widespread drought in 2002-03. Almost 30% of producers who did not expand their herds had fully utilised their carrying capacity.

5 Sample size for dairy industry adjustment survey

	Regional survey of industry adjustment		ABARE dairy industry survey #	
	*Population **	*Sample ^*	*Population ***	*Sample*
Market milk regions				
NSW	1 290	..	1 807	76
Queensland	1 125	..	1 492	40
Northern NSW	..	44	618	19
South East Queensland	..	50	1 088	33
Total of selected regions	..	**94**	**1 706**	**52**
Manufacturing milk regions				
Victoria	6 801	..	7 072	87
Northern Victoria	..	63	2 411	31
Western Victoria	..	62	1 786	27
Total of selected regions	..	**125**	**4 197**	**58**
Australia	**10 654**	**219**	**12 094**	**311**

Population & survey numbers for 2001-2002 survey.
* Number of registered dairy farms, June 2003.
^ Random phone survey conducted in October, November 2003.
** Data from Australian Bureau of Statistics, based on farms with EVAO > $22,500.

Sources: ABARE, Australian Farm Survey Report. Dairy Australia, Australian Dairy Industry in Focus 2003.

For some producers the adjustment to deregulation may have involved changes in their seasonal pattern of milk production. About a quarter of survey respondents have made a change to pre-deregulation seasonal production profile. In the market milk regions there is no evidence of a significant reduction in year round milk production.

Increasing milk production by expanding the size of the milking herd often involves other farm level adjustments. Improvements in the carrying capacity of the exiting land base and acquiring more land are changes that facilitate herd expansions. Almost 30% of survey respondents indicated they have increased the area of improved pasture.

Acquisition of land to expand milk production has not been a major factor in adjustment to deregulation. Just under a third of respondents have expanded their land base since deregulation. It suggests farmers have been more inclined to make adjustments that improve the productive performance of their existing land base.

Increased milk production can also be achieved by improving herd productivity. This generally involves changing stock management practices to increase the average milk yields. About half of the respondents have made changes linked to improvements in milk yields since deregulation. Overall 28% of producers have increased the use of grain based supplements

Increased use of agistment to improve carrying capacity is another potential response to improve farm performance. Shifting non-active stock off-farm can increase the availability of feed for milk production. It is difficult to assess the extent of changes in the use of agistment since deregulation due to the effect of the 2003-03 drought. About 80% of producers indicated they did not use off-farm agistment for milking cows during 2002-03.

Increasing the scale of operations through a herd expansion may require producers to use more hired labor. Survey results indicate that about 20% of producers are using more hired labor since deregulation.

Diversification into alternative agricultural activities is another possible response. Diversification by dairy farmers has increased moderately since deregulation occurred. Less than 20 % of respondents have either expanded an existing alternative enterprise or established a new activity. The move to diversify has been a little stronger in the market milk regions.

Many farmers have made on-farm changes to improve their financial situation since deregulation occurred. For some a supplementary change could involve increasing off-farm income. Survey results indicate that 27% of respondents have increased their off-farm income since deregulation occurred. The response rates were similar across all four regions and it seems likely that off-farm income has played a role in the adjustment process.

Farm level adjustments to deregulation will have implications for the long term debt obligations of most producers. Farm development initiatives could require larger borrowings despite the availability of government adjustment assistance. In other cases producers could use the adjustment assistance to retire long term debt.

The survey results indicate that around 55% of respondents have increased their long term debt since deregulation occurred. A third of all respondents have either reduced or unchanged levels of debt. This response was similar across all four regions. About 12% of producers had no long term debt and there were a higher proportion of debt free farms in the market milk regions.

6 Dairy survey results - producer adjustment to deregulation

	Market Milk Regions	Manufacturing Milk Regions	Total Sample
	%	%	%
What's happened to the size of your milking herd since deregulation?			
Larger	51.1	40.3	45.1
If your herd size increased was this in response to deregulation?			
Yes, fully or partially due to deregulation	81.2	23.5	51.5
If your herd size has not increased what were the reasons? *			
Carrying capacity fully utilised	9.0	41.3	28.8
Mainly for drought reasons	69.0	37.1	48.3
Since deregulation has your seasonal pattern of milk production changed?			
No change	81.9	71.2	75.7
Have you improved the farm carrying capacity since deregulation? *			
Yes - Increased improved pasture	27.7	29.6	28.9
Yes - other	24.4	14.4	18.8
Have you acquired land to expand your dairy farm since deregulation? *			
Yes	26.6	34.4	31.2
Have you made changes to improve cow milk yields since deregulation? *			
Yes - increased grain supplements	24.5	30.4	27.5
Yes - other	25.5	21.6	23.4
Did you have any active milking cows agisted off-farm in 2002/2003?			
No	80.9	80.8	81.2
Have you used more on-farm hired labour since deregulation?			
Yes	18.1	22.6	20.7
Has your farm business become more diversified since deregulation?			
Yes	25.6	12	17.9
Have you earned more off-farm income since deregulation?			
Yes	27.7	27.2	27.1
Have your long term debt obligations changed since deregulation?			
Decreased or stayed the same	32.3	34.4	33.2
Increased	47.5	60.8	55.4
No long term debt obligations	20.2	4.8	11.5

* Respondents able to nominate multiple answers.

Source: , Roger James & Associates, November 2003.

Producer response to adjustment assistance

A key aspect of the response to deregulation is the way producers have used the adjustment assistance they received. There were no conditions on the way producers could use the assistance grants. The only requirement for eligible producers to claim a DSAP entitlement was to complete a farm business assessment.

The average DSAP entitlement involved a substantial sum of money. This was especially the case for market milk producers. For example, the average DSAP payment was almost $200,000 per farm in NSW and $142,000 in Queensland. In addition market milk producers received additional assistance from the *Supplementary Dairy Adjustment* (SDA) package. The average DSAP payment in Victoria was $98,000 per farm.

It was expected that producers who decided to remain in the industry would use their adjustment assistance to make on-farm changes to improve their future viability. The option of converting the quarterly DSAP payments into a lump sum was expected to encourage producers to view the assistance money as an opportunity to finance a substantive change in their farm business.

Evaluating the design of the restructuring package is an important aspect of the overall project. To do this it is important to understand how producers made use of the assistance grants. A number of questions were included in the regional survey to gain an indication of how producers responded to the assistance package.

Survey results indicate that about a third of producers had not previously assessed the viability of their farm business before deregulation occurred. For these producers the FBA requirement in applying for a DSAP entitlement was the first time they had assessed their situation. The response was similar across all four regions.

The FBA requirement was imposed to ensure producers recognised the immediate and potentially substantial impact that deregulation would have on their situation. For some producers it was expected the FBA process would lead to the development of a farm business plan and obtaining professional advice. The FBA may have also encouraged some producers to exit the industry.

Survey results show that around 20% of respondents reacted to the FBA process by developing a farm business plan. The decision to develop a business plan was especially evident in northern NSW where 43% of producers responded in this way. About 20% of respondents reacted to the FBA by obtaining professional advice on how to strengthen their viability. The response was similar across all four regions although the response was a little higher in northern Victoria.

The conversion of quarterly DSAP entitlements to a lump sum payment was popular with most producers. More than 80% of respondents took this option. Around half of these producers converted to a lump sum payment in order to finance farm developments or retire farm debt. The response was similar across all four regions.

Most producers have used the restructuring assistance for farm business adjustment purposes. Around 80% of respondents indicated they have used the assistance for farm developments and/or debt reduction. This question allowed for multiple responses as some producers have used their assistance grants for more than one purpose. About 10% of respondents used some of the assistance money for off-farm investments and 10% used some for non-farm purposes.

7 Dairy survey - producer response to deregulation assistance package

	Market Milk Regions	Manufacturing Milk Regions	Total Sample
	%	%	%
DSAP assistance grants required a completed Farm Business Assessment (FBA). Was the FBA the first time you assessed the viability of your farm business?			
Yes	39.4	33.6	36.2
After completing the FBA did you get professional advice on improving your farm viability?			
Yes	21.3	20.0	20.6
Did completing the FBA prompt you to prepare a farm business plan?			
Yes	29.8	14.4	21.1
Did you convert the quarterly DSAP grant to a single lump sum payment?			
No	17.4	19.5	18.6
Yes - for farm development, retire debt	48.9	52.2	51.0
Yes - for other reasons	33.7	28.3	30.4
Did you receive extra assistance under the Supplementary Dairy Assistance Scheme (SDAS)?			
Yes	76.6	3.2	34.9
How did you use your DSAP/SDAS assistance grants? *			
On-farm development, debt reduction	96.9	76.7	80.8
Off-farm investments	9.8	11.2	10.1
Non-farm and other uses	17.5	7.8	11.5
Receiving it as a quarterly payment	7.6	19.8	13.8
If the assistance grants were used for on-farm development, what was involved? *			
Herd expansion	15.5	7.8	11.6
Pasture or irrigation development	44.5	21.6	33.7
Purchased land	15.5	31.6	25.3
Purchased equipement	44.5	23.5	34.8
Other uses	27.4	24.8	26.7
Did you consider applying for a Dairy Exit Program (DEP) grant and leave the industry?			
No	81.9	84.0	83.0

* Respondents able to nominate multiple answers. *Source: , Roger James & Associates, November 2003.*

Producer responses on the use of restructuring assistance were similar across all four regions. There is some difference in the number of producers who have elected to take the assistance as quarterly payments. In the market milk regions only 8% of producers have taken this option compared with 20% in the manufacturing milk regions.

Where the assistance grants were used for farm development purposes there were a number of alternative uses. A small number of respondents (12%) used some funds for to expand their herd. In the market milk regions the funds was mostly used for pasture or irrigation developments and equipment purchases. The funds were used for a variety of purposes in the manufacturing milk regions although in northern Victoria land purchases (41%) were important.

Financial performance of producers

On-farm adjustment to deregulation will affect the financial performance of producers. ABARE regional survey data was examined to determine if the changes made since deregulation had caused the financial position of producers to deteriorate. An indication of the impact on average farm performance is presented for a region of market milk and manufacturing milk producers.

Changes in average farm incomes and farm costs reflect market developments that have been previously discussed (tables 8 and 9). The gross farm income situation for market milk producers in northern NSW has improved since deregulation. The average price received by has declined substantially but production growth has more than off-set the impact of lower prices.

The gross farm income situation for manufacturing milk producers in northern Victoria has also improved since deregulation occurred. The average milk price increased which reflects the improvement in world prices during this period. The improved income situation also reflects an increase in milk production.

The improvement in gross farm income has to be considered against changes in farm costs. Cash costs increased considerably in both regions. Feed costs, a major component of total cash costs, have risen substantially. Interest and labour costs have also increased. On a per litre basis total cash costs are significantly higher in northern Victoria and moderately higher in northern NSW.

The net cash income situation indicates that producers in northern Victoria have improved their financial position since deregulation occurred. This primarily reflects the high prices for dairy products on world markets during this period. Debt levels have increased but debt servicing obligations have declined because of the large gains in net cash income.

In northern NSW the net cash income situation has also improved since deregulation although the increase is much smaller. The improvement primarily reflects strong growth in milk production. Debt levels have increased and the debt servicing obligations are marginally higher.

8 Changes in dairy farm income position in selected regions

Year ended June	Milk income *	Milk price per litre *	Farm cash receipts	Off-farm income	Total cash income **
	%	%	%	%	%
Northern Victoria					
1998-99	*22.1*	*-2.5*	*19.8*	*117.2*	*21.4*
1999-00	*3.8*	*-10.8*	*7.2*	*15.3*	*7.4*
2000-01 ^	***19.8***	***25.9***	***14.7***	***46.9***	***15.7***
2001-02 p	*42.2*	*12.4*	*42.9*	*-6.3*	*40.9*
Northern New South Wales					
1998-99	*-18.1*	*-4.3*	*-13.4*	*231.5*	*-7.8*
1999-00	*16.4*	*0.2*	*10.9*	*-35.1*	*7.1*
2000-01 ^	***5.5***	***-20.7***	***13.9***	***47.8***	***15.6***
2001-02 p	*39.4*	*18.8*	*29.3*	*40.6*	*30.0*

Annual change in average per farm performance. *Source: ABARE, Australian Farm Survey Report.*
Year to year changes in sample size and survey population affect the comparability of between years.
* Based on total milk receipts net of freight. ^ Poor season and deregulation on 1 July.
** Total farm cash receipts plus off-farm income. p - provisional

9 Changes in dairy farm cost position in selected regions

Year ended June	Feed input costs *	Feed costs per litre *	Hired labour costs	Interest costs	Total cash costs	Cash costs per litre
	%	%	%	%	%	%
Northern Victoria						
1998-99	*29.9*	*3.7*	*-14.0*	*28.2*	*16.6*	*-6.9*
1999-00	*9.7*	*-5.8*	*17.7*	*-3.4*	*14.8*	*-1.4*
2000-01 ^	***0.2***	***5.3***	***-1.9***	***9.4***	***3.8***	***9.1***
2001-02 p	*55.0*	*22.5*	*117.7*	*10.6*	*42.9*	*13.0*
Northern New South Wales						
1998-99	*-15.3*	*-1.0*	*-51.0*	*8.1*	*-13.5*	*1.0*
1999-00	*4.9*	*-9.7*	*25.3*	*19.6*	*8.6*	*-6.5*
2000-01 ^	***31.8***	***-0.9***	***19.7***	***-5.2***	***20.8***	***-9.2***
2001-02 p	*45.8*	*24.2*	*24.7*	*46.1*	*26.0*	*7.4*

Annual change in average per farm performance. *Source: ABARE, Australian Farm Survey Report.*
Year to year changes in sample size and survey population affect the comparability of between years.
* Includes fodder, fertilizer, seed, water and agistment. ^ Poor season and deregulation on 1 July.
p - provisional

10 Dairy farm debt and equity position in selected regions

Year ended June	Closing farm debt		Net cash income *		Debt servicing per dollar earned **		Net farm equity
	$'000	% change	$'000	% change	$	% change	%
Northern Victoria							
1998-99	223.2	*18.9*	92.7	*33.2*	0.21	*-3.7*	78.5
1999-00	255.7	*14.6*	84.5	*-8.8*	0.22	*5.9*	76.8
2000-01 ^	248.5	*-2.8*	120.7	*42.8*	0.17	*-23.4*	76.5
2001-02 p	304.4	*22.5*	159.7	*32.3*	0.14	*-16.4*	78.8
Northern New South Wales							
1998-99	116.1	*24.9*	62.0	*7.3*	0.15	*0.7*	89.1
1999-00	176.0	*51.5*	65.9	*6.3*	0.17	*12.6*	81.8
2000-01 ^	151.1	*-14.1*	67.5	*2.5*	0.15	*-7.5*	87.7
2001-02 p	237.9	*57.5*	95.2	*41.0*	0.16	*3.6*	83.3

Annual average per farm performance. *Source: ABARE, Australian Farm Survey Report.*
Year to year changes in sample size and survey population affect the comparability of between years.
* Off-farm income plus net farm cash income (excludes interest payments, derpreciation, imputed operator labour).
** Interest payments per dollar of net cash income ^ Poor season and deregulation on 1 July.
p - provisional

Concluding comments

The impact of dairy deregulation demonstrates that farmers are able to make adjustments to improve their financial situation in response to substantial policy reform. The regional impact of deregulation has varied substantially and a large number of farmers have decided to exit the industry. The adjustment has affected both manufacturing and market milk producers.

In general survey results indicate that on-farm adjustments since deregulation have focused on two main developments. Producers are running more cows to increase the scale of production. They have also increased the quality and supply of supplementary feed inputs to improve carrying capacity and herd productivity. Expanding the land base to support a larger herd has not been a major factor in the adjustment process.

The impact of deregulation on the Australian dairy industry has been greater in the market milk regions. Farm numbers have fallen significantly in Queensland and NSW but there have also been a substantial number of farm retirements in Victoria. In 2002-03 milk production was 7% and 15% below pre-deregulation levels in NSW and Queensland respectively. However, some of this decline has been caused by the widespread drought conditions in that year.

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