

CowTime



Riding the CowTime wave

Final Report
1 July 2007 – 30 June 2009

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Executive Summary

CowTime is the Australian dairy industry's learning package dedicated to making milking easier and more productive. The project's mission for the period 2007 to 2009 was:

To ensure that the profitability and lifestyle goals of Australian dairy farmers are supported by their milk harvesting system.

The principal investors in the project were Dairy Australia and the Department of Primary Industries Victoria. For this contract, the investors decided that delivery of the program would be only available in Victoria. Delivery in other regions would have to be on a user pays basis.

Building on previous work that identified a huge range in milk harvesting labour productivity across the industry, the key project goals were:

1. To improve Australian milk harvesting productivity by 20% from 2000 to 2010.
2. To reduce the stress on milkers by making milking an easier, safer and more attractive occupation.
3. To build awareness of the benefits of good stock handling during milk harvesting
4. To improve milk harvesting planning in farm business development processes.
5. To ensure that the resources developed by CowTime are continued beyond June 2009.

All goals have been successfully met and have been achieved through a variety of methods and by using a range of innovative delivery formats to tackle the 'grass-roots' milk harvesting issues present on every dairy farm. The 2009 Milk Harvesting Industry Performance Survey¹ results were used to measure the improvements in milk harvesting productivity and showed that there has been a greater than 20% improvement in labour productivity since 2000.

The main extension vehicle was the Shed Shake-up program, a free field day combining a learning session and an on-farm visit. In 2008 the project re-ran an existing Shed Shake-up program '*Go With the Flow*' looking at ways to improve cow flow and stock handling. In 2009 a new Shed Shake-up '*Milking Outside the Square*' was developed which discussed alternatives to twice a day milking - once-a-day milking and automatic milking.

Over 700 farmers and dairy industry representatives have attended the 42 Shed Shake-ups run in Victoria, South Australia and Queensland dairy regions of Australia between 2007 and 2009.

Other methods of delivering the CowTime messages were the CowTime website, the Milking Monitor, technical resources and the innovative multi-media Dairy Decisions CD ROM.

The project is well known amongst dairy farmers as the 2009 Milk Harvesting Industry Performance Survey² revealed 92% of those randomly chosen for interview had heard of the program.

The Shed Shake-up program has been successful in building capacity and promoting practice change on-farm. Independent in-depth evaluation phone interviews³ were conducted 6-8 weeks after the Go With The Flow Shed Shake-ups and have shown 83% of respondents had made a change to their milk harvesting system and a further 7% said they would make a change when they renovate their dairy.

The impacts of these changes have included direct benefits in productivity efficiency gains, less stressful working environments, more efficient work routines, improved safety and improved cow flow and cow welfare.

¹ Down to Earth Research: CowTime Tracking Survey 2009

² Down to Earth Research: CowTime Tracking Survey 2009

³ Down to Earth Research: CowTime Go With The Flow 2008 Post Event Evaluation. June 2008

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There was widespread support for Shed Shake-up days among those attending, with most responding well to both content and format. Consequently, dairy farmers are recommending attendance to their peers and almost all respondents believe CowTime is a worthwhile recipient of industry funds.

There is evidence that the information presented on the days spread further into the dairying community as 37% of those interviewed after the Go With the Flow Shed Shake-ups⁴ shared the DVD with either employees, other farmers or family who did not attend. Additionally 67% shared information they learnt on the day with others – typically people who share milking duties.

In addition to these benefits, the project has shown that improvements are not just about saving money. Having extra spare time and less stress in the dairy are very valuable benefits to farmers. CowTime's case studies highlight the impact of these intangible benefits on farmers and their families.

The CowTime team has identified further opportunities for future work to generate further productivity, including maintaining milk harvesting capability in the Australian dairy industry, further work with once-a-day milking systems, studying the early adopters of automatic milking, research into energy use in the dairy and labour productivity on the whole farm.

These topics address dairy industry needs and will be the means to *ensure that the profitability and lifestyle goals of Australian dairy farmers are supported by their milk harvesting system.*

In a nutshell: CowTime met its project goals within budget and will continue to generate benefits well after June 2009.

⁴ Down to Earth Research CowTime 'Go With The Flow' 2008 Post Event Evaluation

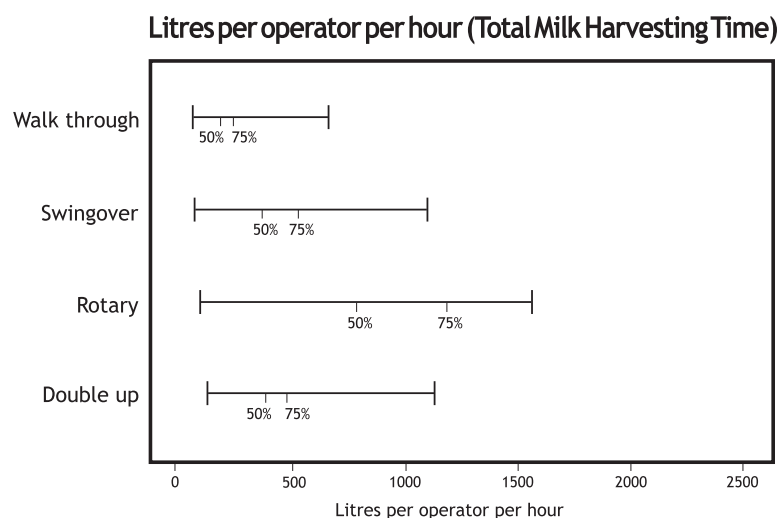
Background to the Project

Industry Need

The productivity achieved at milking time is one of the key factors limiting overall farm productivity. Milk harvesting consumes 40-50% of the farm labour resources and up to 25% of the total farm capital. It is a 'big ticket' item in the farm enterprise, directly impacting on the economic, social and environmental aspects of running a dairy farm. Improving milk harvesting productivity was reviewed by industry in 2001⁵ and was considered a high priority.

The CowTime project commenced in 2001 and was primarily designed to increase labour productivity and has a secondary goal of making milking a more pleasant occupation - therefore improving the working conditions and lifestyle of dairy farmers.

CowTime has identified a wide range in milking productivity across the industry, as measured by the litres harvested per operator per hour (TMHT) and this continues to be the focus of our work. Estimates of the total cost of milk harvesting also show a wide range - from 3.8 to 8 cents per litre.



A 20% increase in labour productivity would save an estimated 1 cent per litre which equates to \$103 million annually for the Australian dairy industry.

Source: 'CowTime Guidelines for Milk Harvesting' DRDC 2003

Objective of the Project

CowTime is a national learning package and its objectives are to make milking easier, more productive, safer and a more attractive occupation.

The project mission is:

To ensure that the profitability and lifestyle goals of Australian dairy farmers are supported by their milk harvesting system.

To achieve the objectives, the CowTime project had five main goals for 2007-9 to be addressed through an extension package. These were:

1. To improve Australian milk harvesting productivity by 20% from 2000 to 2010.

⁵ *Making the most of the milk harvest* – A prospectus for the Milk Quality and Harvesting Sub-program (May 2001). DRDC, 84 William St. Melbourne 3000.

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2. To reduce the stress on milkers by making milking an easier, safer and more attractive occupation.
3. To build awareness of the benefits of good stock handling during milk harvesting
4. To improve milk harvesting planning in farm business development processes.
5. To ensure that the resources developed by CowTime are continued beyond June 2009.

The project has achieved all these goals successfully.

Each of these goals had specific measures of success which detailed the various targets of the project outcomes. These are detailed in the discussion on achievements.

The CowTime Team

The central team, based at the Department of Primary Industries, Ellinbank, were:

Darold Klindworth
Project manager

Diana Carr
Project officer

Additional specialist support was provided by:

Lee-Ann Monks
Monks Communications –
Communications consultant

Dr Bill Morgan
Timboon Veterinary Group –
project adviser and training

Delivery of the CowTime's regional activities was coordinated by a team of four Regional Co-ordinators:

Gippsland:	Gillian Hayman, Facilitation and Project Services
Western Victoria:	Bill Morgan, TVG
Northern Victoria:	Libby Cummins DPI/Shayne Ault DPI
South Australia:	Verity Ingham (Dairy SA)

CowTime seeks strategic guidance and reports to an industry steering committee – the CowTime Advisory Committee. Chaired by Chris Griffin, this committee sat three times and included industry stakeholders representing dairy farmers, funders, equipment companies, dairy processors and technical specialists. Members included:

Chris Griffin, Dairyfarmer, Gippsland (Chair)
Darold Klindworth, Project Manager
Graeme Mein, Consultant
David Nation, Dairy Australia
Colin Waters, DPI
John Leddin, DeLaval
Mark Brummell, DeLaval
Peter Maguire, Westfalia

Phil Craig, Bonlac
Tony Dowman, DPI NSW
Lee-Ann Monks, Monks Communication
Phil Hawkey, Dairyfarmer, Northern Victoria
Malcolm Boys, Dairyfarmer, Rochester
Bill Morgan, Timboon Veterinary Group
Diana Carr, CowTime Project Officer
Greg Hewson/David Hintum, Warrnambool
Cheese & Butter

Delivery Methodology

CowTime has refined its delivery methodology over the term of the project and developed a range of delivery vehicles supported by reliable management, support and evaluation systems. These include the Shed Shake-ups, Dairy Decisions CD ROM and the web-based tools on the CowTime website.

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The Shed Shake-up

The main extension vehicle for the project was the Shed Shake-up day. The one-day format was developed in response to a low demand for the 3-day CowTime Course. CowTime launched the course at the start of the 2002-3 drought. The market for information about expanding dairies virtually disappeared (and is still depressed in many areas) so the Shed Shake-up was developed to encourage farmers to make small, inexpensive changes that have a big impact on efficiency, stress or lifestyle.

Billed as '*a field day with a difference*', the Shed Shake-up day consisted of a formal learning session in the morning with a DVD shown on the topic and group discussion. Farmers also received an information pack during the session. Dairy equipment representatives were invited to give a short presentation on the topic just before lunch with a farm visit in the afternoon.

The main presenter of the Shed Shake-up programs was CowTime's Darold Klindworth with Bill Morgan, CowTime's Western Victorian Regional Coordinator, sharing the presentations. The two Shed Shake-ups offered in 2008 and 2009 were: *Go With the Flow* and *Milking Outside the Square*.

The Shed Shake-up format remains popular with farmers as they value practical and inexpensive ideas presented in an informal and applied manner. It has been shown to motivate farmers to make improvements on their farms. Table 1 shows the number of Shed Shake-up events held since the start of delivery of the Shed Shake-ups in 2004. The total number of people attending a Shed Shake-up is now 4052, with 757 attending in the period July 2007 to June 2009.

Table 1: Attendance statistics for the Shed Shake-up program 2003 to 2009

Dairy region	No. of events	Go With the Flow 2004	Pits and People 2005	Watts 'n Your Dairy 2006	Shorter Milking Secrets 2007	Go With the Flow 2008	Watts 2007/8 [Special request]	Milking Outside the Square 2009	Total
Gippsland	32	130	105	162	212	94		103	806
Western Victoria	37	162	154	56	108	83	65	61	689
Northern Victoria	32	137	108	68	118	90		98	619
South Australia	15	118	69	69	96	49		11	401
Tasmania	17	79	71	50	116				316
Queensland	18	114	102	85	112	92			505
New South Wales	19	75	130	41	259			11	516
Western Australia	9	43	73	35	38				189
Total	146	858	812	566	1059	408	65	284	4052

For a detailed evaluation of the impact of the Shed Shake-up, see the Impact of the Project: On-Farm Changes section.

In addition to the face-to-face method of delivery of the Shed Shake-ups, the project has delivered its messages through web-based tools and technical resources.

Dairy Decisions CD ROM

The CowTime Course was developed as a supported decision-making framework for farmers planning major changes to their milking infrastructure. It has now been converted into a stand alone CD-ROM package called Dairy Decisions. The aim was to provide a broad range of CowTime information and decision-making

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tools from a distance for farmers unable to take time off from their farms, or too far away, to attend a Shed Shake-up or course.

This interactive CD guides the user through the process of assessing future needs, reviewing options and documenting a plan. It contains a workbook to record decisions and tools such as the Milking Monitor and the new Dairy Comparer. To support the decision-making process, the CD also contains two and a half hours of CowTime videos and the complete Guidelines and Quick Notes.

This is the industry's first serious attempt at converting a substantial course into a completely independent learning / multimedia package, allowing farmers to work at their own pace in their own homes.

The CD was launched in June 2007 and was sold through the National Centre for Dairy Education Australia (NCDEA) and Department of Primary Industries, Ellinbank. As well as being used by dairy farmers, it has also been used as part of a NCDEA McMillan course RTE5205A Plan and Manage Infrastructure Requirements. This will ensure that CowTime information is accessible well beyond the lifetime of the project.

The CD was converted into a web-based tool in 2009 and is now freely available on the CowTime website.

Web-based tools on the CowTime website

The Milking Monitor

The Milking Monitor is a web-based benchmarking tool for farmers to assess their milking performance against farmers with similar dairy types. More than 3000 farmers have received a personalised report from the Milking Monitor since the start of the project and 618 received a report during 2007-9.

Dairy Energy Monitor

A new benchmarking tool based on the same concept as the Milking Monitor but focussing on dairy energy was developed as part of the Watts 'n Your Dairy Shed Shake-up series in 2006. The form asked farmers to fill out figures from their last four dairy shed power bills including dollars and kilowatt-hours used. After submitting the form, a report was generated showing personalised results for electricity costs (\$/cow/year) and energy use on farm (kWh/1000 litres of milk produced), hot water use per cluster and an overall energy efficiency summary. The report also contained information on how to reduce energy use in the dairy. The project now has real-life data on energy use for 321 farms. This is the first time this data has been collected, providing a valuable benchmark for monitoring improvement.

Shorter Milking Times Calculator

After the success of the Shorter Milking Times Shed Shake-up, it was decided to create an on-line calculator to compare the farmers' current milk out time with CowTime's estimated Maximum Milk Out Time. It has been averaging 30 hits a month since its release in August 2008.

Technical resources

CowTime has created a valuable set of technical resources, suitable for use by farmers and milk harvesting advisers. The CowTime Guidelines book supported by 35 Quick Notes makes a most comprehensive set of information addressing different milk harvesting topics for the Australian dairy industry. These technical resources are freely available on the CowTime website. New Quick Notes have been developed for each Shed Shake-up so the resource has expanded each year.

Impact of the Project: Achievement of objectives

Evaluation strategy

Evaluation has been an integral part of the CowTime project since its inception. Evaluation has been used to gather evidence to show how well the project has met its objectives and to assess the impact the project has had at the farm level. Regular evaluation has also allowed CowTime to monitor its delivery approach and if not working to adapt better to meet changing industry circumstances.

The project has used evaluation results from participants attending the Shed Shake-up events and commissioned an external consultant to perform more in-depth interviews with a selected sample of 30 farmers from Victoria and South Australia six to eight weeks after the events.

Bennett's Hierarchy, on page 10, has been used to summarise the performance of the project.

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Bennett's Hierarchy

SEEC
(Social, Economic, Environmental Change)

- The 2009 Milk Harvesting Industry Performance Survey⁶ showed a 20%+ improvement in productivity.
- Evidence of improvements that have made milking easier, safer and more pleasant from SS survey⁷ as well as less stress and improved working conditions.
- Changes made by farmers continue with 10 trained people, Guidelines, information on website

Behavioural change

- Impact demonstrated by Shed Shake-up survey – 83% made improvements and 7% planned to in the future.
- The 2009 Milk Harvesting Industry Performance Survey found 55% have made changes
- Time and labour savings were the most popular improvements making milking less stressful.

KASA
(Knowledge, Attitudes, Skills & Aspirations)

- Exit questionnaires demonstrate that the new knowledge and skills learnt will be applied to the farm – 81% proposed to make changes after attending a Shed Shake-up and 83% of the follow-up survey did make changes.
- Skills - increased knowledge of milk harvesting operations and cow behaviour.
- Increased knowledge of once-a-day milking and automatic milking

Reactions

- Exit Questionnaire results show the reactions are overwhelmingly positive to the activities – 96% approval for the Shed Shake-ups
- Exit Questionnaire results show 97% found information useful.
- 100% of farmers surveyed thought CowTime was a useful industry program

Participants

- 755 dairy farmers and service providers attended a CowTime activity
- An average of 1575 unique visits a month to the CowTime website
- Dairy industry and service representatives involved with Shed Shake-up events
- 4 Regional coordinators

Activities

- Delivered 42 Shed Shake-ups to 755 participants
- Benchmarked 618 farms using the Milking Monitor
- Benchmarked 47 farms using the Dairy Energy Monitor
- Training activities for 10 On-Farm Advisors
- Training activities for 10 DEC staff members in stock handling
- Participation of CowTime material in NCDEA courses
- Hosted 3 Advisory Committee meetings
- Distributed E-update quarterly to keep stakeholders informed of progress
- Revised two Quick Notes and published one DVD for the Shed Shake-ups
- Published 7 case studies
- Released 387 press articles and media updates

Inputs

- \$672,000 in funding over two years
- Two full time staff members, Two part time contractors, CowTime Advisory Committee,
- Four regional coordinators

⁶ Down to Earth Research: CowTime Tracking Survey 2009

⁷ Down to Earth Research CowTime 'Go With The Flow' 2008 Post Event Evaluation

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The evaluation plan identified five key evaluation questions to assist in evaluating the achievement of the project's objectives.

Evaluation evidence was collected to answer these questions:

1. To what extent were the project goals achieved through their measures of success?
2. Have the CowTime activities been relevant and useful to individual participants?
3. Were the communications activities successful?
4. What did we learn about the project and what could be improved another time?
5. What was the level of project recognition?

Achievement of the project goals through their measures of success

Goal 1. To improve Australian milk harvesting productivity by 20% by 2010.

Measure of success	Evaluated by CowTime product	Evidence
600 farmers received updated benchmarks for their milk harvesting productivity by June 2009. ✓	Milking Monitor Data base	618 [to 12 May 09] Milking Monitor farm completions
By 2010, 50 th percentile to exceed: <ul style="list-style-type: none"> • 444 Litres/operator/hour (TMHT)⁸ in swingover herringbone dairies; ✓ • 934 Litres/operator/hour in rotary dairies; ✓ • 412 Litres/operator/hour in double up herringbone dairies. ✓ 	2009 Milk Harvesting Industry Performance Survey	2009 Milk Harvesting Industry Performance Survey results showed that the 50 th percentile exceeds the target figures for all three categories.

Discussion:

A survey was conducted in 2009⁹ to update the milk harvesting productivity benchmarks. This was thought to be the best way to determine if the project has achieved the 20% increase in milk harvesting productivity measured in litres/operator/hour (Total Milk Harvesting Time). Table 2 shows values from the 2000 and 2009 surveys and indicates the astonishing improvement in labour productivity since 2000.

Table 2: Changes in Litres/Operator/Hour (Total Milk Harvesting Time) figures 2000 - 2009

Shed Type	50 percentile			75 percentile			90 percentile		
	Year of survey	2000	2009	Change '00-09'	2000	2009	Change '00-09'	2000	2009
Swingover	370	675	82%	510	999	96%	980	1207	23%
Rotary	778	1379	77%	1154	1737	51%	1381	2250	63%
Double up	343	655	91%	460	910	98%	1008	1105	10%

⁸ This figure is 20% above the 2000 Industry Performance Survey Benchmark figure.

⁹ Down to Earth Research: CowTime Tracking Survey 2009

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The large positive changes in milk harvesting labour productivity identified from the survey results are good news for the dairy industry. These changes of 77% - 91% far exceed the target change of at least 20%. However, it should be noted that in the time frame covered by the surveys, a number of things have impacted on labour productivity. Some of the factors influencing this have been: new dairies have been built, labour saving automation has been more widely adopted and herd sizes have grown. With the introduction of deregulation and a host of challenging conditions for the dairy industry, many of the smaller and less efficient dairy operations have left the industry. It should also be noted that these impressive figures could have been even higher had they not been tempered or reduced due to the effect of drought and other factors nationwide that have reduced the total milk flow on many dairy farms.

There is more good news for the dairy industry in these data – namely, that there is still plenty of room for the majority of the industry to move up the scale. The 90th percentile value in all of the three systems is at least 60% greater than the 50th percentile value and more than 20% above the 75th percentile. Furthermore, the average productivity in rotary systems is about twice that for herringbone systems. These comparisons show that there is still a great deal of room for improvement and for further extension work along the lines that CowTime has conducted to date.

It should be noted that many changes that CowTime has precipitated on farms may not lead to direct financial gain but, nevertheless will improve the sustainability of farm families and businesses. Farmers place great value on the benefits from reducing time, stress and hassle at milking. Improving operator safety, cow comfort and working conditions are other tangible benefits but are more difficult to quantify in monetary terms.

Conclusion: Results from the 2009 Milk Harvesting Industry Performance Survey showed much greater improvement in labour productivity compared with the original target of 20% gain for all categories of milking systems in the Australian dairy industry.

Goal 2. To reduce the stress on milkers by making milking an easier, safer and more attractive occupation

Measure of success	Evaluated by CowTime product	Evidence
Delivery of 15 'Go With the Flow' Shed Shake-ups ✓	Shed Shake-up	Evaluation results
Delivery of 15 'Milking Outside the Square' Shed Shake-ups ✓	Shed Shake-up	Evaluation results

Discussion:

The program delivered in 2008 was 'Go With The Flow', the first Shed Shake-up that CowTime developed. The content covered animal behaviour and stock handling as it relates to milk harvesting. The contract requested 15 Shed Shake-ups to be delivered in Victoria, but during the year special requests were received from farmer groups in Queensland and Ballarat, Victoria. These Shed Shake-ups were delivered on a user-pays basis.

Table 3: Shed Shake-up delivery and attendances for Go With The Flow

Region	No of Shed Shake-ups	No attending
Gippsland	5	94
Northern Victoria	5	90
Western Victoria	5	62

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South Australia	2	49
Queensland [special request]	3	90
Ballarat [special request]	1	21
Total	21	406

Independent evaluation¹⁰ conducted after the Victorian and South Australian events revealed that as a result of attending the Go With The Flow Shed Shake-ups:

- 77% of respondents reported that CowTime has helped to make their milking easier.
- 53% now have calmer cows and 43% report milkers are experiencing less frustration as a result. Some respondents said they were enjoying milking a lot more since implementing changes:

“I’m finding the cows are no longer looking at me as if one of us is going to have a nervous breakdown and so I am feeling much better about milking and the cows are much happier with me”.

In 2009 the Shed Shake-up ‘*Milking Outside the Square*’ looked at once-a-day milking and automatic (robotic) milking as ways of saving labour time in the dairy and making milking easier.

This program was not looking for on-farm changes, but was a means to impart up to the minute research on the pros and cons of both systems.

Table 4: Milking Outside the Square attendance figures

Location	No of Shed Shake-ups	Attendance	Date
Northern Victoria	5	98	2 – 6 March 2009
Gippsland	5	103	11- 19 March 2009
Western Victoria	5	61	23 – 27 March 2009
South Australia	1	11	5 May 2009
Bega, NSW [Special request]	1	11	28 May 2009
Total	17	284	

Evaluation¹¹ at the end of the program showed:

- 43% of farmers would consider going changing to once-a-day milking with the main reasons being lifestyle improvements, more free time and being able to use less labour.
- 26% of farmers are considering implementing an automatic milking system, with more than half saying this would be in the next 5 to 10 years.

Participants in the “*Milking Outside the Square*” program valued the opportunity to consider Once-a-Day (OAD) as a tool that could be used to help in certain circumstances. As it is more appropriate for many farms when the milk price is low and the feed costs are high, it has been a timely program to run. Discussions were lively at all venues. A number of individual circumstances were identified that made OAD a good option as it enables off farm work for some farms. All OAD farmers that were contacted report a great improvement in lifestyle and reduced stress.

The automatic milking systems part of the program also generated a lot of discussion. Again it is a technology that has the ability to reduce the stress of milking. While it does not remove the need to operate the farm and manage the production issues, it does free labour from the set time demands of milking.

¹⁰ Down to Earth Research: CowTime Go With The Flow 2008 Post Event Evaluation. June 2008

¹¹ CowTime Exit Questionnaire Results 2009

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The 2009 Milk Harvesting Industry Performance Survey¹² shows that while most people contacted in the survey (51%) suggested that milking was fairly easy only 41% suggested that it was very easy. This suggests that there is still room for improvements to be made.

Conclusion: This goal has been successfully completed.

Goal 3. To build awareness of the benefits of good stock handling during milk harvesting

Measure of success	Evaluated by CowTime product	Evidence
Delivery of 15 Go With the Flow Shed Shake-ups ✓	Shed Shake-up	Evaluation results from the 21 Shed Shake-ups delivered

Discussion:

The Shed Shake-up topic 'Go with the Flow' was dedicated to cow flow and stock handling issues. The evaluation results¹³ showed that:

- 63% said their understanding of stock handling has increased as a result of attending 'Go With the Flow'
- The importance of getting stock handling and cow flow was highlighted by one respondent who offered the following anecdote:

"You come home from this get together and you know exactly what to do. There was one guy there ... poor fellow ... and he was virtually crying he was having such a terrible time in the shed and he turned around to me at the end and said 'There's hope!' and that's exactly how you feel."

Conclusion: This goal has been successfully completed.

Goal 4. To improve milk harvesting planning in farm business development processes.


Measure of success	Evaluated by CowTime product	Evidence
At least 50 farmers use the Dairy Decisions CD-ROM to plan major changes to their milk harvesting system by June 2009 ✓	Dairy Decisions	Distribution figures of the CD-ROMs

The total number of CD-ROMs sold to farmers was 82. This consists of 62 from the NCDEA's Hungry Minds Bookshop and 20 from DPI Ellinbank. In addition a number were given away and 41 copies were sold to DeLaval and Daviesway to give to their clients.

No follow-up evaluation was done on the purchasers of the DVD, but CowTime has produced a case study of Justin Kay who used the Dairy Decisions to assess his options for a potential share farming opportunity.

¹² Down to Earth Research: CowTime Tracking Survey 2009

¹³ Down to Earth Research: CowTime Go With The Flow 2008 Post Event Evaluation. June 2008

<p>Case Study “Thinking Outside the Square”</p> <p>Justin Kay used the Dairy Decisions CD to help him assess an opportunity to go share-farming. Dairy Decisions helped Justin identify the strengths of the farm, particularly its dairy, and also some priorities for improvement.</p> <p>It also analysed the farm’s potential to expand. The results from the Dairy Decisions analysis confirmed that Justin’s ideas were feasible and financially manageable</p>		
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Conclusion: This goal has been successfully completed.

Goal 5. To ensure that the resources developed by CowTime are continued beyond June 2009.

Measure of success	Evaluated by CowTime product	Evidence
Make resources available to the wider network of extension providers via the DEC ✓	Website	All materials available on website Training of On-Farm Advisors
Work with RTOs so that materials can be incorporated into other training programs, especially NCDEA ✓	Dairy Decisions	NCDEA collaboration
CowTime training and learning packages ready for transition to the DEC ✓	Website Training activities	All material available on website Training of DEC staff as On-Farm Advisors

Discussion:

CowTime information is available and used by a wide section of the dairy industry.

The CowTime website (www.cowtime.com.au) has grown substantially over the three years, so farmers can have access to CowTime tools and technical information anywhere at any time. Web usage statistics have consistently shown an increase in the number of visits and downloads of various CowTime materials.

Now all technical information is freely available on the CowTime website.

Further evidence of the acceptance of CowTime’s information is shown by the use of the Dairy Decisions CD ROM as part of the NCDEA’s course materials. CowTime resources and tools have been built into milk harvesting courses from level 2 to 5.

Darold Klindworth trained 10 On-Farm Advisers from DeLaval in 2007, and was part of training course in stock handling offered to staff from the Dairy Extension Centre.

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Included in the 2008/09 work plan for the DEC is an amount of time to mentor three members of the DEC (one from each region) in milk harvesting skills. This represents a start to the succession planning of maintaining and perhaps eventually building up milk harvesting skills.

A two day training session was run for 3 DEC staff members to become CowTime On-Farm Advisors in May 2009.

This combination of training and availability of materials means that the resources developed by CowTime have a future beyond June 2009.

Conclusion: This goal has been successfully completed.

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Have the CowTime activities been relevant and useful to individual participants?

Results gathered from the exit questionnaires at the end of the Shed Shake-ups showed a very positive response when asked if they thought it was worthwhile attending and if they found the information presented useful. See Table 3.

Table 5: Relevance and use of CowTime activities.¹⁴

Year	Topic	Did you find the information useful?	Was it worthwhile attending?
2007-8	Go With the Flow	97%	96%
2008-9	Milking Outside the Square	97%	98%

These results were backed up by the independent phone surveys conducted after the program that showed CowTime was a highly valued program with the vast majority willing to recommend attending a Shed Shake-up to other farmers and also believing CowTime is a useful industry program. See Table 6.

Table 6: Relevance and use of CowTime activities from independent survey¹⁵

Year	Topic	Would you recommend attending a Shed Shake-up to others?	Do you think CowTime is a useful industry program?
2008	Go With The Flow	100%	100%

Conclusion: Evaluation evidence showed the CowTime activities were highly relevant and useful.

Were the communications activities successful?

Effective communications are a key part of our strategy to deliver clear consistent messages to encourage practice change on farms. CowTime engages with the media to deliver information and motivate farmers to improve their milking practices (Table 7).

Table 7: Publications statistics July 2007 – June 2009

Publication type	2007-8	2008-9	Total
Project milestone / final reports	2	2	4
Print articles – Australian Dairy Farmer	6	6	12
Print articles – dairy media	159	228	387
Newsletter grabs	9	12	21
Case studies	4	3	7

Results from the 2009 Milk Harvesting Industry Performance Survey¹⁶ showed that 92% of the farmers interviewed had heard of the CowTime project.

¹⁴ CowTime exit questionnaire results 2008 and 2009

¹⁵ Down to Earth Research: CowTime Go With The Flow 2008 Post Event Evaluation. June 2008

¹⁶ Down to Earth Research: CowTime Tracking Survey 2009

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By far the most popular way of hearing about the CowTime project was through the media.

Table 8: Ways farmers heard about CowTime from the 2009 Milk Harvesting Industry Performance Survey

Question: How do you know about the CowTime program?	Percentage mentioning
Australian Dairy Farmer	46%
General media	27%
Dairy factory newsletters	21%

Case Studies

The project strengthened the ‘case-study’ approach to communicate the benefits of CowTime to farmers and stakeholders. Farmer stories are used to introduce upcoming CowTime events in the regions and are avidly picked up by the farming print media. The events commonly attract follow-up articles in the local print media. In each RDP region, the evaluation techniques help to identify a farmer that typifies the impact that CowTime is having on farms. This case study is then written up for distribution. These stories form the core of the CowTime Australian Dairy Farmer page articles and yearly reports to the RDP stakeholders.

Newsletter Grabs

As part of the communications strategy, newsletter grabs have been produced and provided to the media starting in October 2007. These have been organized by Monks Communication and have been very successful. They have been widely picked up by media through the country. These grabs are short 200 word articles on a technical milk harvesting topic and are released monthly.

Publicity

CowTime puts a great deal of effort into publicising upcoming Shed Shake-up events in the regions. The communications strategy is to build awareness of the opportunities for farmers to improve their operations in a particular aspect of milk harvesting. In this way farmers can choose whether the information is likely to be of use to their business. Letters of invitation were sent to previous attendees and proved to be an effective way of attracting farmers.

Evidence was collected from CowTime Exit Questionnaires to assess how people had heard about each event, see Table 9 below:

Table 9: Ways farmers heard about CowTime

Media	Go With The Flow	Milking Outside the Square
Dairy industry newsletter	37%	35%
Letter of invitation	17%	25%
Local paper	7%	14%
Word of mouth	18%	11%
Tanker drop	12%	8%
Other	2%	3%
Website	2%	2%
Dairy discussion group	4%	2%
Email	1%	

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Before each event the Communications Adviser, The Regional Coordinator and the Project Officer conducted a phone hook-up to discuss the various publicity options available. The local knowledge of the Regional Coordinator was vital to work out which method would be most useful in their local dairy region.

Table 8: Attendance figures at Shed Shake-ups

Year	Shed Shake-up topic	Number of events	Number attending
2007-8	Go With the Flow	21	406
2007-8	Watts n Your Dairy [special request, April 2008]	4	65
2008-9	Milking Outside the Square	17	284
	TOTAL	42	755

Conclusion: The communications strategy was successful in building awareness of the project and in attracting farmers to the Shed Shake-ups.

What did we learn about the project and what could be improved another time?

An important learning for the project was that we discovered that information disseminated at the Shed Shake-ups is reaching substantially more people in the industry than only those who attend. Information, in the form of the DVDs and CowTime information packs, was shared with employees, other farmers and family members.

The project has provided an opportunity for dairy farmers to interact and discuss all aspects of dairy farming – an important finding when the industry is faced with a growing number of challenges.¹⁷ A farmer interviewed in The Go With The Flow¹⁸ survey said:

“I’ve been milking for a long time and you tend to get stuck in your ways a bit, so it’s good to get out and talk about it. I thought it was good to hear things that you know you should be doing, but you tend to slip a bit over the years”.

Other farmers interviewed made similar comments and it appears that some of the CowTime attendees are people who rarely get an opportunity to discuss basic dairying principles with their peers and indicates CowTime may have reached the ‘laggards’ in the industry.

We were reaching a new audience each year, with over 50% never having been to a Shed Shake-up before.

¹⁷ Down to Earth Research : CowTime Tracking Survey 2009

¹⁸ Down to Earth Research: CowTime Go With The Flow 2008 Post Event Evaluation. June 2008

What was the level of project recognition?

Dairy farmers expressed a high degree of satisfaction with the day and CowTime’s use of their industry’s levy funds (Table 9).

Table 9: Summary of participant’s perceptions of the Shed Shake-up program¹⁹.

Year	Topic	Satisfied with the day	Satisfied with the use of levy
2007-8	Go With the Flow	96%	90%
2008-9	Milking Outside the Square	98%	87%

The project is well known amongst dairy farmers as the 2009 Milk Harvesting Industry Performance Survey²⁰ revealed 92% of those randomly chosen for interview had heard of the program.

¹⁹ CowTime Exit Questionnaire Results 2008 and 2009

²⁰ Down to Earth Research: CowTime Tracking Survey 2009

Impact of the Project – On-Farm Changes

In a nutshell: The project continues to encourage farmers to plan and to make practice change on farm.

After the ‘*Go With the Flow*’ Shed Shake-ups, the project measured the intention of the participants to make on-farm changes. Further independent in-depth evaluation interviews were conducted 6 to 8 weeks after the final Shed Shake-up in each dairy region to discover what impact the program had on farms.

As the ‘*Milking Outside the Square*’ Shed Shake-up was primarily aimed at providing new information to farm managers rather than seeking on-farm changes at the dairy operational level, there was no follow-up evaluation done.

The results ²¹ show a high 83% of participants returned home and made an on-farm change to their milk harvesting systems as a result of what they learnt on the day and 7% said they would make a change when finances allowed or when their herd was back to peak milking. Appendix 1 contains the full report of these results.

The practice changes as a result of attending the Shed Shake-ups included:

- Reduced stress in the dairy by being calmer, less noisy and not using poly-pipe on the cows and learning better stock handling skills
- Improved cow comfort and cow flow by increasing stall sizes, giving the cows more room in the yard and dairy, improving exits and entry for better cow flow
- Training the cows to come in on their own by staying in the pit, to improve work routine times

These practice changes have resulted in:

- Improved milk harvesting productivity
- Improved cow flow and cow comfort has made milking less stressful.

The changes have helped to improve labour productivity in the dairy.

However, it should be noted that many changes that CowTime has precipitated on farms may not lead to direct financial gain, but nevertheless will improve the sustainability of farm families and businesses. Farmers place great value on the benefits from reducing time, stress and hassle at milking. Improving operator safety, cow comfort and working conditions are other tangible benefits but are more difficult to quantify in monetary terms.

The impact of these changes on the farmers, their families and their business are highlighted in the case studies (examples below) CowTime produces each year for distribution to our stakeholders and the media.



Small changes make milking fun

Stephen Ball, Gippsland

Simple changes and a different attitude to his cows have made milking enjoyable for Stephen Ball.

“People said I had a good dairy but I couldn’t get it to work. CowTime made me realise I wasn’t handling the cows appropriately and the exit

coming out of the shed wasn't big enough. My wife tells people that I like to go and milk now, which I never really did before."



Little things make a big difference

Penny Gill, NVIC

CowTime gave Pennie Gill (left) some insights into cow behaviour to hone her stock handling skills.

"Ever since CowTime I've made a conscious decision to be more patient with the herd at milking. The end result is less stress on the animals and less mess in the dairy."



Fresh look at cow flow

Jason Gardiner, WVIC

CowTime's *Go with the Flow* DVD helped Jason Gardiner and his milking staff create a quieter environment in the dairy. Both cows and humans are happier.

"Once you understand cow behaviour, you start looking at every part of cow movement from the paddock through to leaving the dairy. You suddenly notice things you haven't seen for years."

CowTime highlighted how human behaviour affected cow behaviour and included a take home DVD on stock handling skills. *"The cows are happier because it's a quieter environment in the shed and they aren't being pushed in the yard with the backing gate. And our staff can milk without having to keep getting out of the dairy to chase cows."*

Impact of the project - New Learning Products/Support Tools created

To complement the new Shed Shake-up "Milking Outside the Square", the Quick Notes on Once-a-Day milking and Automatic Milking Systems (AMS) were revised. Work on the Once-a-Day Quick Note involved the cooperation of farmers in Australia as well as New Zealand. The Automatic Milking Systems Quick Note made use of the research work on AMS in NZ and Camden as well as the learnings from Max and Evelyn Warren's farm in Gippsland, Victoria.

A new video was produced using the services of Biomedica in Geelong. Two Once-a-Day farmers are featured in the Once-a-Day section, Steven Riley from Victoria and Matt Gunningham from Tasmania. The AMS section has footage from the Warren's farm and the FutureDairy site. Kendra Davis was involved in the content of the AMS section. The video also contains interviews with Steven, Matthew and Max Warren.

Three case studies were written up on Once-a-Day milking using Steven, Matt and Tim Kennedy. These were included in the folder given out at the Shed Shake-ups as well as a copy of the video, the Quick Notes and relevant technical notes from the FutureDairy project.

There has been a very good level of cooperation and communication between CowTime and FutureDairy on this work.

Finance and Intellectual Property

In a nutshell: CowTime is operating within budget on behalf of the project's sponsors.

Budgeted Income (2007-9)

The CowTime budget is managed through DPI and the contribution of the organisations that fund the development of the project are detailed in Table 12

Table 12 – Cash income for current contract 2007 – 2009

Budget summary	2007 - 08	2008 - 09	Total
Dairy Australia	215,000	215,000	430,000
DPI	96,000	100,000	196,000
Other (in-kind) not included in costing model	22,000	24,000	46,000
Total	333,000	339,000	672,000

Intellectual Property

The intellectual property developed by CowTime is owned by the sponsors in proportion to their contribution to the program of labour productivity extension work (Table 13). The work started in 1998 with DAV428 *Improving Labour Productivity in Milk Harvesting on Australian Dairy Farms* and extends through the two separate CowTime contracts from July 2001 through to June 2007 (DAV107707). The calculation of IP only includes those organisations that contribute directly to the development of the materials and excludes in-kind contributions used in regional delivery activities.

Table 13 – Contributions of CowTime sponsors for calculations of IP share

Organisation	Contribution (\$1,000)	Proportion of IP (%)
Dairy Australia Ltd	430	70%
DPI	196	30%

Additional CowTime Activities Outside the Contract

In addition to the contracted deliverables, the project has received the following requests to provide extra Shed Shake-ups:

Who requested	What they asked for	Number of events	Number attending	Date
DairySAT Western Victorian group	Watts n Your Dairy	4	65	April 2008
DairySA	Go With the Flow	2	49	May 2008
DairySA	Milking Outside the Square	1	11	May 2009
Warrnambool Cheese and Butter, Ballarat	Go With The Flow	1	21	July 2008
Darling Downs Young Farmer Network, Qld	Go With The Flow and cow comfort	3	92	October 2008
Bega Cheese, NSW [fee for service]	Milking Outside the Square	1	11	May 2009
Primex, NSW [fee for service]	Milking Outside the Square, Go With the Flow	1	TBA	June 2009
	Total	13	249	

New Zealand

The project has cooperated with DairyNZ with the aim of taking the program to New Zealand. The CowTime Guidelines and Quick Notes have been provided to DairyNZ so they can adapt them to New Zealand conditions.

Darold Klindworth has explained the Milking Monitor and has provided the calculations and parameters to DairyNZ so the program can also be adapted.

Recommendations for Future Research

In a nutshell: CowTime has identified new programs of work that would generate further productivity, business and lifestyle benefits.

Milk harvesting capacity

CowTime is concerned that there will be a lack of milk harvesting capacity in Australia. The NCDEA is working on a training program to help train and certify their trainers. This should also be open to others such as milk factory field officers and other parties. This is in its very early stage of development. In general it would appear that much of the existing milk harvesting capacity either in government employment or private, for that matter, were trained in a government agency. So where will the next generation come from?

CowTime recommends that resources are provided to support the development and maintenance of milk harvesting capacity. At least so that it is possible to help train the trainers.

Once-a-day milking

There is scope for some monitoring and tracking of a sample of Australia once-a-day farmers using it either for the whole of lactation or only a part of the lactation. There is certainly potential for once-a-day milking to fit in to the management system of a percentage of Australian dairy farms. The CowTime Shed Shake-up *'Milking Outside the Square'* highlighted this potential but has almost no Australian research to back it up other than what was done in Tasmania.

CowTime recommends that resources are provided to monitor and track a number of once-a-day milking farms across the national industry.

Automatic milking

Until about 20 commercial farms have a couple of years under their belt, it will not be sensible to put together a "how to" program for adopters. It would make sense to have a system in place where there is the capacity for Dairy Extension Centre personnel to "learn" with the early adopters where practical.

CowTime recommends that resources to monitor and "learn" with early adopters of automatic milking systems are provided.

Energy use in dairies

With the cost of energy rising and expected to continue to do so dramatically, energy use is more and more on the industry agenda. There are more players approaching farmers with packages to help them save money. There is a need for farmers to have clear information on the benefits of particular systems in their application. Even understanding the situation relating to rebates and renewal energy certificates is very confusing for the average individual. CowTime is currently being seen as a leader in this area. This leadership or edge will be soon lost if no future work or action is undertaken in this area.

CowTime recommends funding to stay abreast of details and developments on systems to reduce energy usage and provide a way to get this information to farmers.

Labour productivity on dairy farms

The use of labour to milk cows continues to be an issue for many dairy farms. That is a consideration for some of the once-a-day farmers and some investigating automatic milking. It is important for the industry to have the capacity to provide some guidance on this issue. This should be extended to the labour productivity of the whole farm system. Irish work found that many dairy farms spent a lot of time on maintenance.

CowTime recommends that up to date capacity/knowledge on milk harvesting labour productivity is maintained and tied to the productivity of the whole dairy farm operation.

Stray Voltage

CowTime often receives requests from dairy farmers for help with stray voltage problems. There is lack of experienced people working in this area who can do anything constructive on farm. It is recommended further training and resources should be developed in this area resulting in a pool of people able to provide meaningful advice and help on farm, both to determine if there really is an issue and if so to provide a solution.

Appendix 1: CowTime Go with the Flow 2008 Post Event Evaluation

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Department of Primary Industries

Summary Report:
**CowTime 'Go With the Flow' 2008
Post Event Evaluation**

June 2008

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'Go With the Flow' 2008 Post Event Evaluation

Background and methodology

'Go With the Flow' events were held in locations across Victoria and South Australia between March and May 2008. Approximately six weeks post event, a random sample of attendees were contacted to participate in a telephone interview. A total of 30 interviews were conducted, including 8 in western Victoria, 8 in Gippsland, 8 in northern Victoria and 6 in South Australia. Only two people contacted refused to participate – one who did not own a dairy farm but attended with her daughter and one relief milker who only worked occasionally.

Reasons for attending

Question asked: What made you decide to go along to the Shed Shake-up day?

- Respondents attended 'Go With the Flow' for a number of reasons which include a desire to learn more about stock handling (27%) and cow flow (20%). In some situations, this was driven by a hope that information provided would solve current problems while in others this was linked with a desire to keep abreast of current thinking:

"I have problems in the dairy ... poor cow flow at the exit ... and I thought I might find a way of resolving the issues I have."

"My shed is fairly good, but I thought I might learn something that I didn't know. It's always worth going to these things because you never know what you will learn."

- Several respondents (27%) attended because they had found previous shed Shake-up days useful and expected 'Go With the Flow' to be the same.
- A further 23% were encouraged to attend either by listening to other dairy farmers who participated in previous sessions or by noticing promotional material which stimulated their interest:

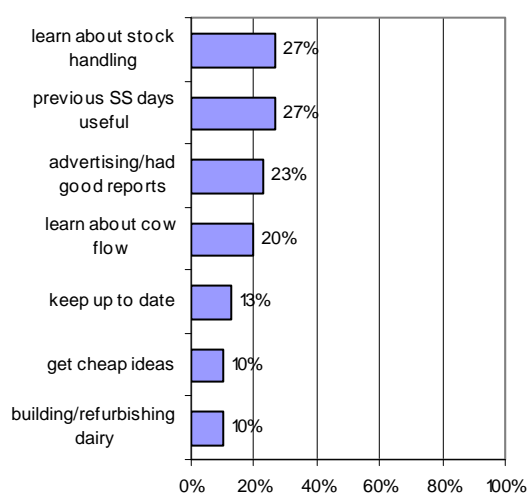
"I was given a sheet with a case study showing how this couple had got better at handling their cows by going along to a Shed Shake-up day and I thought I might be able to improve my stock handling skills."

Impressions of the day

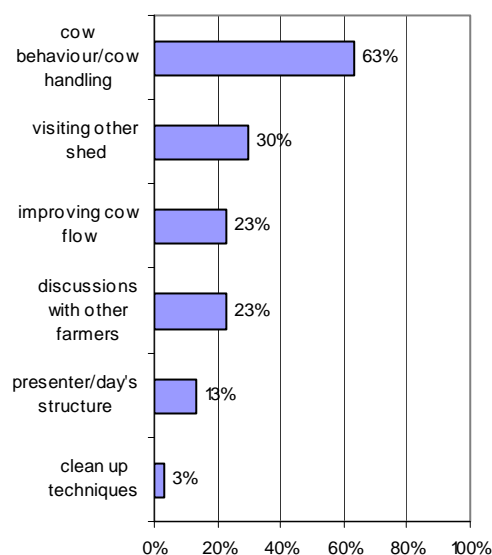
Questions asked: What were your impressions of the day? Was there anything you found particularly interesting or useful? Was it worth your while to attend?

- Encouragingly, all respondents said it was worth their while to attend 'Go With the

main drivers to attend (% mentioning)



main points of interest (% mentioning)



Flow' due to learning something interesting or useful.

- Learning about cow behaviour and cow handling techniques interested 63% of respondents, with many commenting this was something they should know, but have never really made the connections prior to attending the session:

“I also liked the talk about the comfort zone of the cows and this is something I should have known ... I’ve been around stock all my life ... but it’s one of those things that you probably need to be told before you make the connections that you should.”

- Identifying factors that impede good cow flow was mentioned as interesting or useful by 23%.
- Having the opportunity to visit another shed and discussing difficulties faced with other farmers was also useful for a number of respondents:

“I’ve been milking for a long time and you tend to get stuck in your ways a bit, so it’s good to get out and talk about it. I thought it was good to hear things that you know you should be doing, but you tend to slip a bit over the years.”

- The above point and several other comments made by respondents suggest several of the ‘Go With the Flow’ attendees are people who typically do not attend other farmer groups or have much contact with other dairy farmers normally. It was evident to the researcher that several of these respondents are people who would normally be identified as the lower end of the industry or ‘laggards’. This deduction is based on comments made regarding the number of cows milked, dairy type and size, lack of interaction with others in the industry and issues being faced on farm.

Impact on understanding of good stock handling

Question asked:

Has your understanding of good stock handling been increased as a result of attending the day?

- Approximately two thirds of respondents said their understanding of good stock handling increased as a result of attending ‘Go With the Flow’. Among those who said they were already aware of how to handle stock correctly, many pointed out that despite this, it is worthwhile being reminded to ensure old habits do not resurface and also as a reminder to educate milking staff:

“It’s good to be reminded of things so you don’t slip back into your old ways when you’re in a hurry or it’s wet or whatever.”

“I think the information is really good to remind you to impress upon your employees how they need to handle the cows. Sometimes you forget to impress this upon them.”

understanding of good stock handling increased



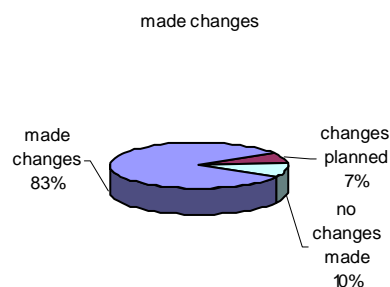
Changes made to milk harvesting system as a result of attending

Questions asked: Have you made any improvements to your milk harvesting system based on

anything covered on the day? What were they?

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- A high 83% of respondents made changes to their milk harvesting system based on issues covered during 'Go With the Flow'. A further 7% have changes planned when they renovate their dairy.
- Almost half the respondents now give their cows more time to come into the dairy on their own and 40% are staying quieter and calmer in the dairy. One in ten report dispensing with poly pipe or at least using it less, while the same proportion have grooved stock yards so cows no longer slip over.



change made to milk harvesting system	% of respondents mentioning
Give cows time to come in on their own	47%
Staying quiet/calm in the dairy	40%
Not using poly pipe/using poly pipe less	10%
Grooved yard so not so slippery	10%
Don't invade cows' space	7%
Improved/widened yard	7%
Upgraded equipment	7%

Reasons for not making changes to milk harvesting system

Question asked: Is there any particular reason for not making changes?

- Only five people interviewed have not made changes to their milk harvesting system as a result of attending 'Go With the Flow'. One person said they have major structural problems with their dairy which can only be resolved with major works they can't afford currently. One has all his cows agisted due to the drought, three believe there is no need to change – they already handle their cows in the manner described and do not have issues with cow flow.

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Impact of changes made

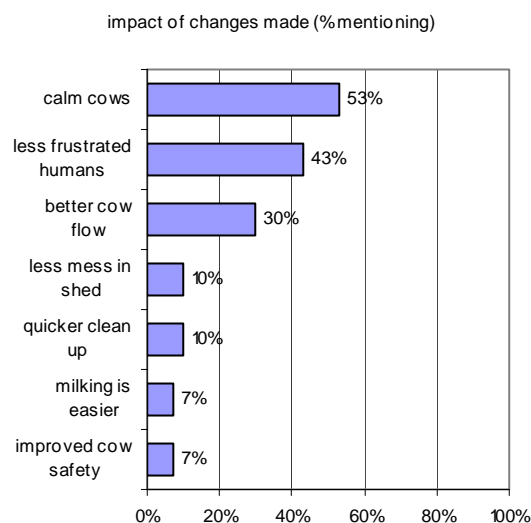
Question asked: *What has been the effect of those changes?*

- Fifty-three percent (53%) of respondents now have calmer cows as a result of implementing changes recommended at 'Go With the Flow' and 43% report milkers are experiencing less frustration as a result. Some respondents said they are enjoying milking a lot more since implementing changes:

"I'm finding the cows are no longer looking at me as if one of us is going to have a nervous breakdown and so I am feeling better about milking and the cows are much happier with me."

"I actually like to go and milk now which I never really did."

- Cow flow has improved in 30% of respondent herds, 10% say they have noticed less mess in the shed as a result of cows being quieter and 10% also say their clean up time has reduced. In 7% of cases, cow safety has improved.
- When asked directly if CowTime has helped make milking easier, 77% of respondents reported that it has.



Use of materials/aids provided

Questions asked: *Have you watched the DVD that came in the information pack? Have you shared the DVD or information you learned on the day with anyone else?*

- Forty-three percent (43%) of respondents have watched the DVD provided and a further 20% will watch it as soon as they have time.
- In 37% of cases, the DVD was shared with employees, other farmers or family who did not attend the day. Notably, one respondent said he showed it to a group of dairy farmers who visited him and due to their interest in the program wanted to source additional copies of all the DVDs that have been made for other Shed Shake-up days.
- Additionally, 67% of respondents shared information they learnt on the day with others – typically people who share milking duties.

Perceptions of Shed Shake-up days

Questions asked: *Would you recommend attending a Shed Shake-up day to other farmers? Why? Why not?*

- All respondents said they would recommend a Shed Shake-up day to other farmers and several mentioned having done so.

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- The main reasons given for making this recommendation are linked to learning practical and useful tips (50% mentioning) and believing these tips encourage better practices (23%). Several respondents suggested the information presented at 'Go With the Flow' made dairy farmers think outside the square and consider doing things better:

“I would be very surprised if someone went along and didn't pick up something to implement. It's easy to get locked into a little square in the way you do things because that's the way you've always done it or that's the way your father always did it.”

- Learning about cow flow (13%) or cow behaviour/cow handling (13%) was mentioned by several respondents as a reason they would encourage participation in the day. The importance of getting this aspect of milking right was highlighted by one respondent who offered the following anecdote:

“You come home from this get together and you know exactly what to do. There was one guy there ... poor fellow ... and he was virtually crying he was having such a terrible time in the shed and he turned around to me at the end and said 'There's hope!' and that's exactly how you feel.”

- The table below outlines the reasons given for recommending Shed Shake-up days:

reasons for recommending Shed Shake-up	% of respondents mentioning
Learn practical and useful tips	50%
Encourages better practices	23%
Interact with other farmers	17%
Learn about cow flow	13%
Learn about cow behaviour/cow handling	13%
Keep up to date	7%

Perceptions of the CowTime program

Questions asked: From your perspective, do you think CowTime is a useful industry program?

- In an encouraging result, all respondents believe CowTime is a useful industry program.

Interest in next Shed Shake-up topic

Questions asked: The next Shed Shake-up topic will be on alternatives to twice a day milking –

looking at automatic milking and options like once a day milking or three times a day milking. Would you or someone else on the farm be interested in attending a Shed Shake-up on this topic? If no: Why not?

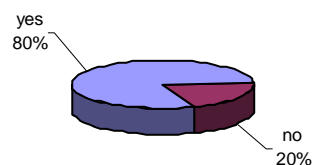
- Eighty percent (80%) of respondents said they are interested in attending a Shed Shake-up day focussed on alternatives to twice a day milking. Some showed interest due to the breed of cow they are milking:

“I would be really interested in that – to see how people have gone with either one or three milkings. I’ve often wondered with the Holsteins giving so much milk now ... you leave them for 12 hours and you think gosh, you must be getting so uncomfortable ... so you wonder if three times a day is an option.”

“Milking once a day has its appeal. We have lots of Jerseys in the herd and they lend themselves to it and also when the prices are good and there is plenty of feed about I think three times a day could be an option, so I’m interested in hearing about those things.”

- Others are interested in learning the pros and cons of different systems.

interested in alternatives to 1x day milking



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- Automatic milking options are of interest to some due to expectations of adopting that technology in the future.

Conclusions

- * 'Go With the Flow' has encouraged improvement in stock handling among most of those who attended – an important finding when animal welfare issues are under intensifying scrutiny.
- * The importance of re-enforcing good animal handling is recognised by most who attended.
- * As a result of this change, both dairy cows and dairy workers are experiencing less stress and clearly enjoying the experience more.
- * It appears from responses that some of the attendees are people who rarely get the opportunity to discuss basic dairying principles with their peers and indicates that CowTime may be reaching the 'laggards' in the industry. There is also evidence that CowTime information is shared with people who do not attend – also potentially 'laggards'.
- * Dairy farmers who attended 'Go With the Flow' have picked up practical and useful tips and consequently believe Shed Shake-up days are worth attending and are happy to recommend them to others.
- * Information disseminated at Shed Shake-up days is reaching substantially more people in the industry than only those who attend.
- * There is substantial demand for future Shed Shake-up days.

Appendix 2: 2009 Milk Harvesting Industry Performance Survey Executive Summary

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CowTime Tracking Survey 2009

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Executive Summary

Background and methodology

The CowTime Tracking Survey 2009 aims to provide information on milk harvesting equipment currently used on dairy farms and to explore practices implemented in relation to milk harvesting and animal handling. The degree of awareness and participation in online and personally delivered programs is explored in the survey, along with the impact of participation.

The survey consists of 300 Computer Assisted Telephone Interviews (CATI) with a random sample of dairy farmers operating in a double up dairy (100 interviews), swing over dairy (100 interviews) or rotary dairy (100 interviews). Survey respondents were selected randomly from a list of levy payers provided by Dairy Australia and interviewed from a central, supervised call centre in a Melbourne suburb. Survey results are compared with those reported on in 2004⁽²²⁾.

Additional information in this report is sourced from in-depth interviews conducted with Shed Shake up day participants over the past four years.

Key survey findings

- Awareness of the CowTime program has grown since 2004 to 92% of respondents. Promotion of the program through print media and milk companies has proven successful.
- Seventeen percent (17%) of respondents have had involvement with at least one aspect of CowTime. One day clinics and Shed Shake up days have been attended by 17% of all respondents, while 8% have used the Milking Monitor or some other aspect of CowTime's website.
- Involvement with CowTime has resulted in changes to milk harvesting systems of at least half those attending. CATI results suggest 55% have made an alteration to their system as a result of attending a course, clinic or Shed Shake up day, but in-depth interviews conducted with Shed Shake up day participants shortly after the session indicate the proportion is more likely to be 68%. There are also a proportion of CowTime participants (16%) who anticipate changing some aspect of their milk harvesting system in the future due to information presented.
- Currently 36% of respondents have no complaints about their milk harvesting system, but others are not completely satisfied.
- Less than half the respondents (42%) have upgraded their milk harvesting system in the past five years. Changes made by this group have typically included updating equipment or extending the dairy. Despite this, 33% of all respondents believe their dairy's performance is limited – mainly by the number of clusters available (16%) or a shortage of labour (13%). Currently, the 'average' dairy farm milks 9.4 cows per cluster and has 1.7 people working in the dairy at any given milking.
- New dairies have been built in the past 15 years by 13% of respondents. Among others, 21% believe their dairy would benefit from a substantial upgrade and 30% believe a partial upgrade is required. Overall, 17% of respondents would like to build a new dairy.
- Of note, some respondents who have recently built a new dairy say they are not satisfied with their milk harvesting system and clearly have made some poor decisions.
- Forty percent (40%) of dairies now have automatic cluster removers (ACRs) – a significantly higher proportion than 2004 (28%). Use of ACRs is likely to increase further, with 15% of respondents saying this is the first equipment they would install if they were to improve their milk harvesting system.

⁽²²⁾ CowTime External Evaluation 2004 *Down To Earth Research*

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- There has also been significant growth in the use of electronic identification (EID) over the past five years. It is now used in 19% of dairies compared to 13% in 2004. Most use EID for computer assisted feeding, but 12% also use it for auto drafting and a further 9% say that in the event of upgrading their system auto drafting would be the first thing they installed.
- A significantly higher proportion of dairies are fitted with a plant washing system with automatic chemical dosing compared to 2004 (34% compared to 21%) and the use of automatic plant wash systems has also increased substantially (from 17% to 30%).
- While more than half respondent yards are still cleaned using only a hose (55%), there has been an increase in the proportion using hydrant wash systems (up 9 points to 13%).
- Exfoliation gloves are now used on 26% of farms (was 20% in 2004); although an arguably high proportion (40%) knows about these gloves but chooses not to use them.
- Cow handling methods appear to have improved slightly compared to five years ago. Currently, although 76% of respondents say milkers leave the pit or milking area to push cows onto the platform, the proportion doing this more than three times a milking has fallen from 34% to 25%. There is also a slight improvement in the proportion of respondents with herringbone dairies saying they rarely wait for cows to milk out (from 30% to 38%). Similarly the average number of cows to go round twice on a rotary dairy platform has fallen from 35 cows to 30.
- Injuries to milkers remain arguably high, occurring on 19% of farms over the past 12 months. While many injuries have not resulted in lost labour time, there are a number of milkers who have missed more than 3 milkings due to injuries incurred.

Conclusions and recommendations

- Clearly, CowTime has had an impact on the industry and is not only linked to improvements in milk harvesting systems but also to providing an opportunity for dairy farmers to interact and discuss all aspects of dairy farming – an important finding when the industry is faced with a growing number of challenges.
- There are still a proportion of dairy farms experiencing difficulties with their milk harvesting systems – many of whom have not yet attended a Shed Shake up day or benchmarked their performance using the Milking Monitor. It would be beneficial to continue making CowTime information available to dairy farmers either by extending the program or incorporating it into other extension packages.
- Automated systems are becoming increasingly more common, but a large proportion of dairy farmers still use manual systems. In-depth interviews conducted with Shed Shake up day participants over the past four years have highlighted the fact CowTime is seen as an independent – and therefore credible source – of information, particularly on automated systems and this factor should be considered when deciding on the future of CowTime.
- Further evidence that CowTime information continues to be needed by the industry lies in the finding not all dairy farmers building new dairies recently are satisfied with their system.
- Injuries to milking staff continue to occur on dairy farms and clearly information and assistance to reduce this needs to be a focus for the future.

