Australian Dairy Herd Improvement Report 2013

Celebrating 30 years of ABVs

Australian Dairy Herd Improvement Scheme

NATIONAL HERD IMPROVEMENT ASSOCIATION OF AUSTRALIA INC. NHIA

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Enquiries

Australian Dairy Herd Improvement Scheme

ADHIS Pty Ltd ABN 97 006 475 378
Level 2, Swann House
22 William Street
Melbourne Victoria 3000
T 03 8621 4240
F 03 8621 4280
dabernethy@adhis.com.au
www.adhis.com.au

National Herd Improvement Association of Australia Inc. Reg No. A0008711E
Unit 1/112 Synnot Street
Werribee VIC 3030
T 03 9742 7244
F 03 9742 7696
carol@nhia.org.au
www.nhia.org.au

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NHIA Chairman's report

By Graeme Gillan
NHIA Chairman

The National Herd Improvement Association is proud to co-operate with ADHIS in the production of this publication, which provides the Australian dairy industry with an important record of the level of productivity of the national dairy herd.

Productivity is a buzz word in today's world. Nobody – whatever the business they are in – can afford to stand still and stop striving to be more efficient, more productive in what they do. Dairy farmers are particularly aware of their levels of productivity because many of the parameters are relatively simple to measure; the total amount of milk in the vat at the end of the day, milk production per cow, pasture usage are just a few. Increasingly, however, researchers and scientists are finding more and more ways to measure productivity and genomics is providing some really interesting results for dairy farmers. We are looking at some exciting developments in the next few years with new traits, new ways to measure them and new information to help dairy farmers become even more productive.

All over the world, the trend in cattle breeding is towards measuring health traits such as cell counts or mastitis resistance, fertility, daughter pregnancy rates, hoof health, feed efficiency and others. All farmers want to work with healthy, productive animals and it has become abundantly clear that genetics has a vital role to play in breeding animals able to withstand the rigors of high milk production.

Herd testing in Australia – the measurement of individual cow performance for a range of traits – remains a vital tool for dairy farmers to manage their operations efficiently. The old saying of "you can't manage what you don't measure" has never been truer.

The statistics contained within this report provide a fascinating insight into farm and cow performance. It is significant, I believe, that the gap between the production of herd recorded cows and non herd recorded cows has never been greater. Herd recorded cows this past year have produced 38% more than their non-recorded contempories (Figure 1, page 4). Why is this so? The answer lies in the herd recorded herds having access to better information on which to base their decisions, most especially breeding decisions or those involving genetics. Dairy farmers today, more than ever, need to keep track of cow performance and strive to maximize genetic gain in order to continuously improve.

Genomics is providing us with so much more information but it is very important to realise that these estimates are only as good as the data we have to arrive at those estimates. We are in an era where we need more – not less – data to ensure information is current and relevant for our breeding programs today. This past year, for example, has seen some important work done by both ADHIS staff and NHIA member service providers to increase the amount of fertility data in the evaluation system and this has had major benefits for the fertility ABV. This is important work.

I firmly believe that we are on the cusp of some exciting developments in the dairy industry in terms of providing farmers with the tools to make decisions in the future. Herd recording by NHIA member organisations will continue to make an enormous contribution in this area, providing the foundation upon which the dairy industry can measure, benchmark and innovate to give Australian farmers the ability to continuously enhance productivity on their farms.

ADHIS Chairman's report

This year's Australian Dairy Herd Improvement Report highlights the collaborative nature of our industry. I would like to begin by recognising the strong and effective working relationship between ADHIS, NHIA and its member organisations which include bull companies, herd recording and data collection organisations.

Each of our organisations is committed to the collection of the best possible data to provide the Australian dairy industry with the type of information that makes a real difference to farmers and participants. Information that not only reports what has happened over the past few months but also the ability to predict future gains and opportunities through herd improvement.

ADHIS is supported through our major funding partner in Dairy Australia and by the innovative contributions from the Dairy Futures CRC. I acknowledge both organisations for their vision and capacity in helping us to deliver world class information for the benefit of our industry.

The production of meaningful statistics is enabled by working with herd recording and data collection organisations to assemble accurate and reliable data from dairy farmers. Data refers to not just milk and milk component information but also includes matings, pregnancy test data, calving details that can be supplied to national database of herd records managed by ADHIS. In 2013, many of our farmers will have seen the benefits of this when they received their Genetic Progress Report – a new tool for monitoring the success of your breeding choices over the past ten years. I would encourage any farmer who has not yet seen their Genetic Progress Report to contact their herd test centre or ADHIS.

ADHIS is acutely aware that with increasing amounts of on-farm data as well as the influx of genomic information, its software capacity needs to increase to ensure that our industry maintains a world-class herd improvement system; both for sires and our Australian dairy cows. I am very pleased to announce that we have successfully received funding from our major funder, Dairy Australia, to undertake significant software upgrades to support the future of genetic improvement in the Australian herd.

The expectations we have of our cows continue to evolve over time. As such, ADHIS have commenced a review of the Australian Profit Ranking which is our current National Breeding Objective. This was last reviewed in 2008-2010 and it is important that farmers have continued confidence in the ranking system for bulls and cows. You will hear more about how you can get involved in this detailed study through 2014.

On behalf of the ADHIS Board, I would like to welcome Glen Barrett who has taken up the newly created role of ADHIS Operations Manager to support the implementation of key projects. I thank the ADHIS staff for their commitment and dedication; both the extension team and DEPI-Bundoora based technical team. In particular, Mr Daniel Abernethy who has just completed 10 years of dedicated service to ADHIS.

By Adrian Drury
ADHIS Chairman

NHIA activities

By Carol Millar
NHIA General Manager

The past year has seen arguably more change within the Australian herd recording environment than any other. There have been a number of exciting developments that should see the herd test sector grow from strength to strength.

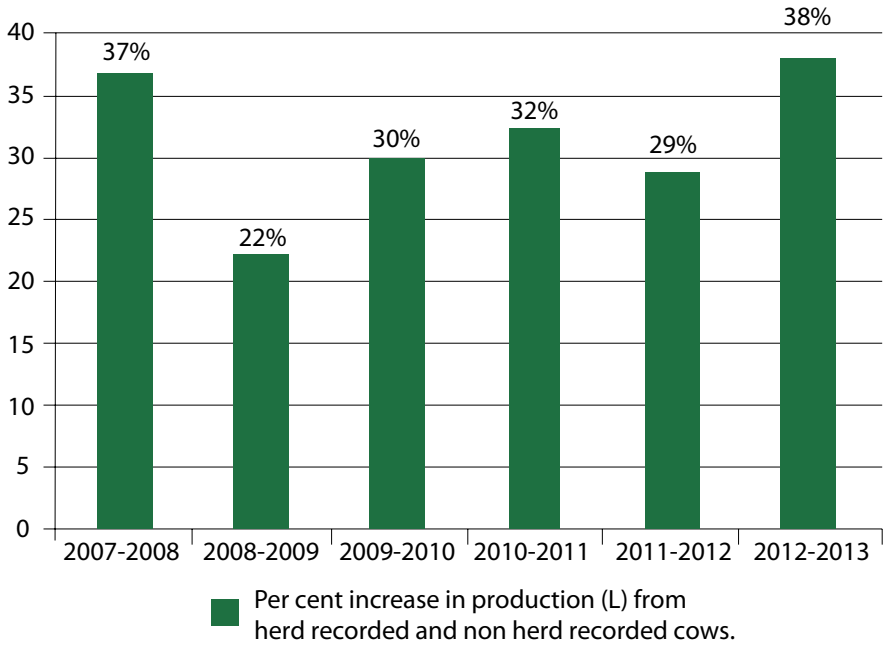
Australia has traditionally had many service providers to the herd test sector. It is true to say that in almost every state farmers have generally had a choice in the provision of their herd testing service. Whilst this choice might have been limited in some geographical regions, it remained true that there was genuine competition within the sector for farmers' herd test business.

For many years, this competition has generally resulted in service providers competing with each other primarily on the basis of cost, rather than any substantial differentiation of service offering. This developed a mindset over time, both within the service provider sector and the farmers, of value being equated with cost. As a result, competition reduced margins leading to reduced resources being available for re-investment in the development of new equipment, systems and processes for the sector.

Ultimately this lead to a sector which is a low cost to farmers but paradoxically offered limited value since there were virtually no internal resources for research, development or innovation.

The competition between herd test service providers has additionally resulted in a system where there has been little industry co-operation in areas such as laboratory services, data processing or transport where cost efficiencies might reasonably have been achieved. Ironically, such intense competition

Figure 1: Herd recorded cows produce significantly more milk compared to non herd-recorded cows.



therefore helped to keep costs higher for service providers and further prevented the investment of resources in herd test research and development.

Change has come recently to Victoria in particular with a substantial rationalisation of the sector in the past twelve months. This rationalisation should yield economies of scale to newly enlarged service providers such as National Herd Development and Hico – businesses for who herd test is core business.

Additionally, Yarram has benefited from an amalgamation of the herd test and artificial breeding businesses into one organisation that has already seen the benefits of new technology in the form of electronic milk meters.

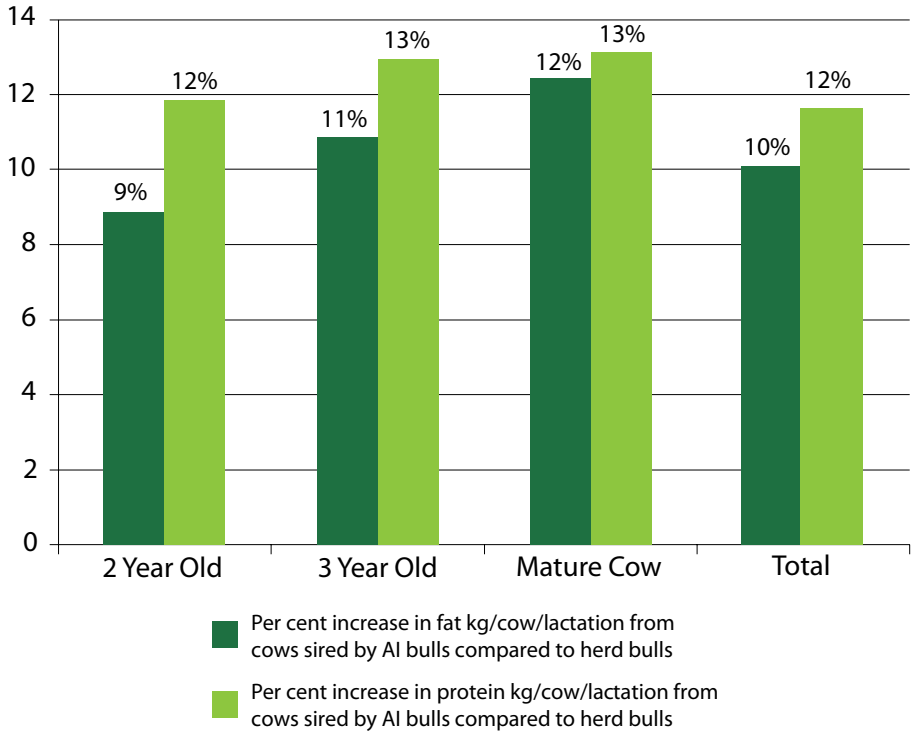
One of the highlights of the past year has been the Herd '13 Conference in Bendigo. We were very fortunate to have had Neil Petreny from CanWest DHI as one of the featured speakers who provided a fascinating insight into the differences between the Canadian and Australian systems. It was very clear from his presentation that the Canadians have realised great benefits from rationalisation within their herd test sector and there is cause for optimism that Australia can follow their example.

Another of Neil's presentations dealt with the development of new services within herd testing. One of the services he highlighted was pregnancy testing from the milk sample collected during herd test. As a result, at least three service providers in Victoria and Western Australia have now begun to offer this service to their customers.

This strategy of pregnancy testing from milk samples is a perfect example of adding value to the process of herd testing whereby farmers are offered the maximum return of information from the extra effort that herd testing requires. It is an exciting addition to the suite of services offered by herd test service providers.

This report is of great interest to all sectors of the dairy industry. It provides an important benchmark about the productivity of our industry as well as many interesting facts – most notably that progeny of Artificial Insemination (AI) bulls substantially outperform herd bulls as shown in Figure 2. Any dairy farmer interested in making a profit, must understand this and act upon it.

Figure 2: Cows that are sired by AI bulls produce more fat and protein kilograms compared to cows sired by herd bulls.



ADHIS activity report

By Daniel Abernethy, ADHIS General Manager

2013 marks a significant milestone for ADHIS and the Australian dairy industry, the 30 year anniversary of the first publication of Australian Breeding Values (ABVs). Thirty years of ABVs means farmers are milking more of the kind of cows they want in their herds. About one third of the productivity gains achieved on farm are the result of farmers using better genetics. With the help of bull breeding companies providing genetically superior bulls, today's national herd is $234 per cow more profitable producing 30 kg more protein and exhibiting improved overall type than the 1983 equivalent.

This milestone would not have been possible without the continuing support and collaboration of a broad range of government, industry and commercial partners. These partnerships provide a strong foundation for success across the research, development, implementation and extension activity areas that are outlined in this report.

2013 has also seen the mainstream uptake of genomics. Since their introduction in 2011 the proportion of young genomic bulls has quickly increased to over half of all Holstein bulls in the Good Bulls Guide. That represents a rapid uptake of the technology that will deliver faster rates of genetic gain by using bulls with more confidence from a much younger age. The development of genomic technology has been fast paced and demanding. Its success in Australia is the direct result of collaborative work between ADHIS, Dairy Australia, Dairy Futures CRC, Department of Environment and Primary Industries, breed societies and commercial partners. In 2013, the reliability and accuracy of genomic breeding values improved through the better use of parent average and modified blending procedures for young bulls.

With technologies such as genomics now becoming firmly embedded in the Australian dairy industry we are fast seeing a colossal shift in the way genetic evaluation is conducted in the world dairy environment. A fast changing environment requires up-to-date technologies and flexible decision making. In 2014 ADHIS will be conducting a review of Australia's national breeding objective (currently the Australian Profit Ranking) to evaluate what cows best meet the needs of Australian dairy farmers into the future. The review will involve extensive industry wide consultation, scientific review and an analysis of farmer priorities.

ADHIS has commissioned the development of new software for Australia's genetic evaluation system. Our current software has been in operation since 1997 and change is required to meet future demands. Supported by Dairy Australia, this major upgrade will deliver a more efficient and dynamic platform upon which genetic evaluation services can be delivered to industry.

This report provides an overview of this year's key initiatives followed by a full list of developments in Figure 4 (page 8).

Good Bulls Guide

ADHIS produces the Good Bulls Guide in April and August to coincide with the public release of Australian Breeding Values (ABVs). The Good Bulls Guide is an independent ranking of top bulls for Australia's National Breeding Objective (the Australian Profit Ranking (APR)) with trait leader tables focused on key economically important traits. Following the update of Australia's daughter fertility ABV, the Good Bulls Guide now includes a ranking of high fertility bulls for several breeds. The Good Bulls Guide continues to receive strong industry endorsement in AI sire catalogues, industry publications and the wider media.

Feeding the Genes

ADHIS commissioned the 'Feeding the Genes' study which investigated interactions between dairy cow genetics and feeding systems on milk production and the cow's ability to last in the herd. The study drew upon data from 505 Australian dairy herds using a wide range of feeding systems. The study concluded that regardless of feeding system, herd managers should select high Australian Profit Ranking (APR) sires whose ABVs are aligned with the breeding objectives for their herd. These bulls are listed in the Good Bulls Guide published by ADHIS.

Genetic Progress Report

ADHIS' new Genetic Progress Report uses ABVs produced from data collected through herd recording to let farmers track the genetic progress of their herds. The Genetic Progress Report, released earlier this year, monitors the success of breeding choices and benchmarks herds against the national average. The Report analyses animals over a ten year period and tracks genetic gain for profit, production, type, longevity, fertility and mastitis resistance. The Genetic Progress Report adds value to the data already collected through herd recording and, like the Good Bulls Guide, is independent and backed by strong science. Herd-test centres and Holstein Australia can now provide Genetic Progress Reports for their clients.

Fertility ABV – a multi-trait prediction model

Daughter fertility is a trait that contributes to the APR and was of particular focus in 2013. Improvements to the models used to calculate daughter fertility ABVs mean farmers now have more choice when it comes to breeding for improved fertility. A new 'multi-trait' fertility ABV, introduced in April 2013, has moved from using two types of fertility data to five types. The additional information is more readily available for younger bulls and better accounts for cows that never re-calve. The new model has increased the average reliability for this trait for young bulls by 6-10% depending on the breed which means farmers now have a greater potential for selection. The number of bulls with publishable fertility ABVs has doubled to over 7000 bulls with a fertility ABV(i) data available for a further 55,000 overseas bulls. Farmers will be able to make faster genetic gains for fertility by having more bulls with fertility ABVs to select from. This new model is the result of research conducted by the Dairy Futures CRC, DEPI-Vic and ADHIS.

RD&E activity summary

ADHIS continues to invest in a range of research, development, extension, education and communication activities. Figure 4 highlights the impact of several 2013 developments.

Figure 3: New Fertility ABV model means more choice for farmers breeding for improved daughter fertility.

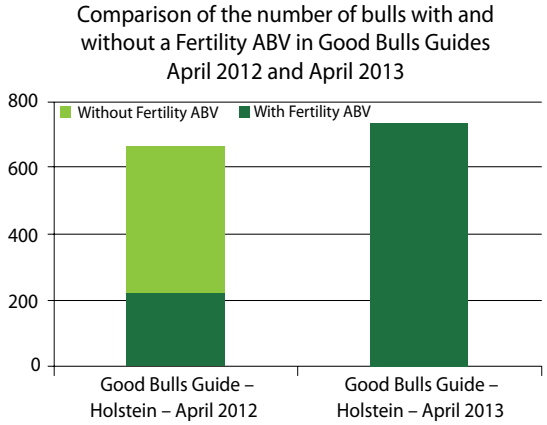


Figure 4: A range of ADHIS activities in 2013.

Development	Activity	Impact
Feeding the Genes	Feeding the Genes, a research project to understand the interaction of genetics and feeding systems, was completed.	Farmers and advisers are better equipped to make more informed decisions about the value of higher genetic merit cows in their own feeding system.
GippsDairy Focus Farms	Four farms are supported to build a better understanding of the role of genetics within their herd, fine tune their breeding objective and use tools like the Good Bulls Guide, Genetic Progress Report and genotyping to improve the genetics of their herd.	Focus Farms and their associated steering groups, advisory teams, field day participants and readers of Focus Farm reports have an opportunity to see the latest genetic tools applied in a real-farm context.
DPI Breeding for Performance project	Facilitated genetics discussions amongst farmer groups, contributed to DEPI information sessions, contributed to capacity building of DEPI staff.	The base of genetics extension providers is broadened so that more farmers are able to benefit from using ABVs to improve their herd.
Fertility project	Implemented new Daughter Fertility ABV model. Hosted Data Chain Workshop for data providers and software manufacturers to improve data flow between organisations. Used a case study approach to discover and resolve data pipeline blockages. This project is a collaboration with the Dairy Futures CRC	Farmers can more effectively improve this trait through breeding because more bulls have Fertility ABVs.
NCDEA breeding unit	Support NCDEA in the development and delivery of 'Develop and Implement a Breeding Strategy' unit from the Diploma of Agriculture program.	Farmers are supported with regional delivery of a formal training program in applied dairy cattle breeding.
New reports for genomically tested animals	ABV(g) reports for genomically tested cows have been improved to include additional data. Top genomically tested cows and heifers are published with each ABV run.	Breeders are able to make more effective use of genomic information about their own animals and other high-ranking animals in the population.
Building the reference population	ADHIS continues to work closely with the CRC and other industry partners to see the continued building of Australia's genomic phenotype reference population.	Increase in the reliability of genomic breeding values which means farmers can select young bulls and imported bulls with no Australian daughters with more confidence.
Good Bulls Guide	Published and distributed in April and August 2013. The Good Bulls Guide provides data on bulls that are above average for profit (APR), regardless of the country or company they come from.	Farmers can build their herds with confidence by selecting bulls from the Good Bulls Guide.
Parent Average regression for Holstein ABV(g)s	Parent average used in calculating the ABV(g) for young sires regressed (brought back closer to the average) for bulls with less than 10 daughters and for heifers.	The result is improved accuracy of early predictions of a genomic bull's genetic merit.
Herd 13	Co-hosted a very successful Herd '13 Conference with NHIA and Holstein Australia.	Conference participants experienced a fascinating program of local and international speakers.
30 years of ABVs celebration	Hosted a dinner that recognized the contribution of breeders and industry leaders in achieving the 30 year milestone. New video released to promote the use of ABVs.	Increased awareness of the impact of ABVs to industry. Australia's top herds and breeders recognised.
Test day model for Production	Research is ongoing to implement a test day model for production traits.	Once implemented, ABVs for production traits will have a higher reliability.
GES2	Tender process completed and software upgrade commenced.	ADHIS services will be more flexible and able to respond to new developments when new software commissioned in about two years.
Interbull Workability & Fertility	ADHIS was successful in passing the Interbull Quality Assurance tests for milking speed, temperament and fertility meaning ABV(i) for these traits are now available.	Farmers will be able to better compare bulls from around the world for these traits.

In November 2013 ADHIS announced the appointment of Glen Barrett to the role of operations manager. In this role Glen will support ADHIS General Manager Daniel Abernethy and oversee a range of operations, services and projects including genomic testing, export heifer services and genetic evaluation system upgrade.

Glen comes to ADHIS with broad ranging experience in the construction/building, agricultural and small business sectors covering a broad range of skills. Glen's knowledge and experience in the dairy industry is strong having grown up and worked on the family dairy farm in Gippsland and he also spent time with South Gippsland Herd Improvement. ADHIS welcomes Glen and looks forward to working with him in driving current and future initiatives.

ADHIS Board and Committees

ADHIS Board of Management

The Board met six times during the year to govern the activities of ADHIS so that dairy farmers can maximise their opportunity to benefit from genetic improvement.

Members: Adrian Drury (Chairman), Daryl Hoey, John Harlock, Matthew Shaffer, Stuart Tweddle, Lyndon Cleggett, Jock Macmillan, Daniel Abernethy (General Manager and Secretary).

ADHIS staff

Daniel Abernethy, ADHIS General Manager

Glen Barrett, Operations Manager

Genetic Evaluation
National Data and Database Service

Gert Nieuwhof, Geneticist and Team Leader

Kon Konstantinov, Statistician

Paul Koh, Data and Services Manager

Judith Schweitzer, Information Scientist

Erica Jewell, Data and Services Manager

Education and Extension

Michelle Axford, Extension Manager

Peter Williams, Extension Officer

Sarah Saxton, Extension Officer

Industry consultation

Effective industry consultation underpins the ADHIS Strategic Plan. ADHIS achieves industry consultation across its activity areas through its committees, specific meetings with individuals and organisations, and regular stakeholder meetings. ADHIS values the input that it receives through the following committees and discussion forums.

Stakeholder meetings

In 2013 ADHIS hosted an ABV Discovery Day, Data Chain Workshop and industry technical meetings. These meetings provide ADHIS with a forum to discuss genetics and data in detail and for open discussion.

Genetics Committee

The Genetics Committee brings together scientists from a number of organisations to review genetic developments within ADHIS.

Members

Prof. Mike Goddard (Chairman, University of Melbourne), Assoc. Prof. Julius Van der Werf (University of New England), Dr Bruce Tier (University of New England), Dr Rob Woolaston, Dr Mekonnen Haile-Mariam (Department of Environment and Primary Industries), Assoc Prof Ben Hayes (Department of Environment and Primary Industries), Dr Kevin Beard (ADHIS Consultant), Dr Gert Nieuwhof (ADHIS), Dr Kon Konstantinov (ADHIS), Daniel Abernethy (ADHIS) with support from Dr Jennie Pryce (Department of Environment and Primary Industries).

Type assessment committee

On an annual basis, meetings are held with Holstein Australia and Jersey Australia, two breed societies that provide linear type data to ADHIS. Linear Type Evaluations for the coming year are reviewed, with improvements made to the organisational aspects of data collection that should improve the amount of data collected.

Record Standards committee

The Records Standards Committee provides representatives from data processing centres a forum to discuss data issues relating to herd improvement records and genetic evaluation. A key activity for the Records and Standards committee in 2013 was the update of the Memorandum of Understanding between ADHIS and Data Processing Standards.

Members

Dr Matthew Shaffer (Chair of ADHIS Records & Standards Committee), Mr John Stevenson (Dairy Express), Mr Peter Nish (Tasherd), Mr Frank Treasure (Farmwest), Dr Mike Larcombe (Mistro Group), Mr David Parkinson (AUSherd), Dr Gert Nieuwhof (ADHIS), Mr Paul Koh (ADHIS), Mr Daniel Abernethy (ADHIS).

Appraising AI practices and semen handling

Dr Barry Zimmermann
InCalf Project Leader
03 9694 3777
bzimmermann@dairyaustralia.com.au

About 58% of Australia's 6,700 dairy farmers do their own AI (DIY), however, InCalf research has shown that many DIY inseminators under-perform compared to professional inseminators.

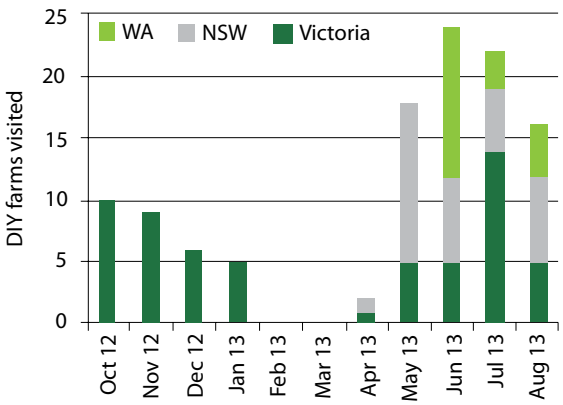
A research project in 2012-13, supported by Dairy Australia and NHIA, has piloted the use of a new on-farm appraisal service for DIY inseminators. The project was designed to help identify high-risk DIY semen handling and insemination practices. It also tested the feasibility of such a service being offered by artificial breeding (AB) businesses to their DIY farmer clients. Checklists were provided to AB businesses to appraise the performance of inseminators doing their own AI in Victoria, NSW and WA.

This study has highlighted many interesting trends in AI practices, including:

1. Many farmers had not received any AI training for a long time; the average time since the most recent training was 12 years.
2. More than a third of the farmers do a relatively small number of inseminations; 36% perform less than 100 inseminations per year.
3. Almost half the farmers were less than satisfied with the time put into heat detection on their farms (52%) or their workers' ability to detect heat (43%).

In general, DIYers were performing most aspects of AI well but on each farm at least one or two key things could be done better to lift AI performance.

Figure 5: The project visited 112 farms in three states.



What the on-farm appraisals told us about the high-risk practices in semen storage, handling, thawing and AI technique:

- 1 in 4 operators placed semen too deep, beyond 1cm past the end of the cervix (26%)
- 1 in 6 operators couldn't pass the gun through the cervix efficiently (16%)
- 1 in 3 operators did not normally warm the gun on a cold day (34%)
- 1 in 4 operators had water levels too high or too low (25%)
- 1 in 5 operators did not check the water temperature in the flask during the AI process (19%)
- 1 in 4 operators did not keep loaded guns warm and free of contamination (26%)
- 1 in 4 operators did not take measures to ensure proper hygiene at entry into cow (29%)
- 1 in 6 operators did not dry the straw properly (16%)
- 1 in 5 operators flicked the straw (21%)
- More than half the farms using auto-thawing flasks did not check them at the start of the season or monthly

Many of the risks were from tank to cow but semen placement was also a key issue. Any of these factors alone, or more importantly in combination, would likely affect conception and in-calf rates.

Farmers in the study appreciated the one-on-one approach in the appraisal session where they felt free to ask the questions they had "always wanted to ask".

The AB businesses found that the appraisals helped strengthen their relationships with their DIY clients, increasing sales of ancillary products such as thawing flasks, heat detection aids and other equipment.

The results of this pilot study show that with appropriate marketing the DIY AI appraisal pack could successfully be used by AB businesses to assess AI DIY semen storage, handling, AI technique and farm facilities. There are associated business opportunities for offering reproductive advice on issues such as heat detection, synchrony programs and the use of sexed semen on dairy farms.

For more information on this service pack contact: Barry Zimmermann, InCalf Project leader, 0418124809 bzimmermann@dairyaustralia.com.au

Data for decisions

Dairy Australia
Countdown Downunder
Your Levy at Work

How do dairy farms best employ information? This is not a question that is unique to farming, but in fact a question that relates equally to all businesses regardless of their type or size. The majority of dairy farms have in excess of $400,000 in livestock depending on how you value calves and yearling heifers. Irrespective of the exact valuation, the stock are generally the largest capital item after the land and plant and represent the main business production unit. Anyway you look at it, knowing the right types of information about your livestock, in a timely manner, assists in understanding where the business is currently situated and how decisions can be best formulated.

In 2013, Countdown undertook three activities mentioned below, as components of the wider, project plan for 2012/13. All of these activities had, as one of their underlying themes, the timely and appropriate use of information to assist farm decision making. Irrespective of whether people are more comfortable with the term "data" or "information", the thrust of these activities was about using appropriate knowledge within the farm business when required.

The first activity was the upgraded design and delivery of the Countdown Adviser Short Course. The Adviser Short Course had been run successfully for vets, milking machine technicians and dairy advisers since 2000. However, up until 2009, the course model had been fundamentally the same since its inception. 2013 saw the delivery of two back to back courses where a heavier emphasis on the collection and use of herd testing data, via Countdown Mastitis Focus, was one of the additions to the program. An altered approach to collating and interpreting farm milk quality information during a mastitis investigation was also weaved into the course case studies. For the 45 plus advisers that have completed the course in 2013, the roadmap for collecting and interpreting information during the process of an investigation is clearer, as is its use as a monitoring tool. It is clear that farms employing herd testing data tend to progress more efficiently through an investigation as there is a more visible picture of new infections and the dynamics of the spread of mastitis.

The second activity was the re-fresh of the Mastitis Focus website. This is a single page website that acts as a portal for farmers or advisers wishing to employ their herd testing information to create a Mastitis Focus report. The report provides an accurate snapshot of mastitis levels and infection patterns over any nominated 12 month period. Experience over the past five years has clearly illustrated that farmers who also enter their clinical mastitis and treatment records into on-farm software programs create more useful reports as the information about new infections and infections that are cured is far richer and better for decision making. Currently only around 1 in 5 farms utilising Mastitis Focus include electronic clinical case information. The website remains located at: www.mastitis focus.com.au and reports can be generated without cost.

The final activity was the creation and release of the Countdown Mastitis Toolkit app for smartphones. This app was created specifically for IOS and Android driven smartphones. The app also runs on tablets although the screen rendering has been optimised for phones.

The design premise for the app was simple – how could Countdown best take the mastitis control information contained in the Farm Guidelines and related resources and transform them using a more flexible delivery method? After considerable thinking, an app was deemed to be the best platform because of its portability, immediacy of information and the ability to make the interaction of mastitis information more flexible through an electronic medium. The app has four main sections:

- Farm Guidelines – an edited version of the book
- Topics with detailed information around a presenting scenario such as the appointment of new staff
- Library containing related Countdown resources
- Tools for common mastitis control tasks such as calculating a withhold period

The app is available through the I Tunes and Google play store and is free. It is another small, but significant piece of the "useful information" landscape around mastitis control for farmers.

Dr John Penry
Project Leader
Countdown Downunder
03 9694 3777
john@primarylogic.com.au

Dairy Futures CRC Report

Dr David Nation, CEO, Dairy Futures CRC

Dairy Futures CRC is delivering genomic technologies with the potential to double the rate of genetic gain in Australian dairy herds. As a result of work so far, genomics is firmly established in all aspects of genetic evaluation and is in extensive use by dairy farmers in breeding programs. Research is now focused on improving farmers' ability to select younger sires, and using information from the entire DNA sequence to accelerate genetic gain in targeted traits including fertility and feed conversion efficiency.

Selecting younger sires

The introduction of genomics has created an entirely new market segment for young bulls assessed with genomics. Genomic breeding values (ABV(g)) allow breeders to reliably assess the genetic merit of young Australian bulls before they have sired progeny. A new project to increase the number of young bulls assessed for genetic merit using genomics has now completed its first year. The GenTest project tested 629 Holstein and Jersey bulls in 2012–13: more than double the number tested in the previous year. The most important benefit of this increase is that more diverse bloodlines were identified with elite ABV results, and this should ultimately translate to greater pedigree variation in proven bulls. This work is also contributing to the development of more cost-effective genomic screening methods.

Improving fertility

Fertility continues to be an important research focus. Along with good management and feeding, ABVs can be used to improve fertility in dairy herds. ADHIS implemented a major improvement in the way the Fertility ABV is calculated in 2013 (see page 7). To make the best use of this new model, good quality data is needed; particularly mating and pregnancy test data. The CRC and ADHIS are now working together to increase the amount and quality of data used in the Fertility ABV calculation by overcoming barriers that prevent data flowing from farms to data processing centres. In addition, a two-year research project (Ginfo) has begun to establish a 'nucleus population' of 100 herds that will contribute herd data and genotypes directly into the national reference set. The ultimate aim is for 10 years of breeding to increase the six-week in-calf rate by 10%.

Improving feed efficiency

Feed conversion efficiency and feed intake traits have now been validated and are showing genuine promise as a new tool for herd improvement. These are complex new traits, and it has been decided that the best pathway to implementation is to consider the traits as part of the current review into the National Breeding Objectives (see page 7). The CRC is also investigating links between feed efficiency and both methane emissions and heat stress tolerance.

Industry collaboration

Dairy Futures CRC is a collaboration between dairy farmers, pasture and cattle breeding companies, government and researchers that aims to deliver $320m in value for dairy farmers through transformational bioscience innovations. The CRC attracts large-scale support from state and federal governments and from dairy levy funds from Dairy Australia. During 2012–13, 20 participants contributed $21m in cash and in-kind contributions. World-class research is undertaken by the Department of Environment and Primary Industries Victoria. Research in the Animal Improvement program was also undertaken during the year by the University of Melbourne, University of Queensland and Monash University. Project partners include the ADHIS, Holstein Australia, Jersey Australia, Genetics Australia, Dairy Australia, CRV and the Gardiner Foundation. The CRC has expanded global research collaborations during the year, including a new participation with 14 international organisations in the Global Dry Matter Intake initiative.

Herd Recording Statistics

The practice of herd recording delivers reliable information for on-farm decision making. Every year, this data is compiled and published to facilitate a broader analysis of herd and production trends.

Tables 1-13 describe production trends by age, breed, mating type and region. As some data in this report dates back to the 1930's, you will find a rich resource describing Australia's changing herd.

Statistics for previous years and further file formats are available at www.adhis.com.au

Table 1 : National and State Totals and Production Averages.

State	Number of Herds	Herds and Cows Recorded				Production Averages					
		Included in Averages	Excluded from Averages	Total Cows	Herd Size	Milk litres	Fat %	Fat kg	Protein %	Protein kg	Lactation Length days
Victoria	1,977	307,658	125,725	433,383	219.2	6,694	4.0	268	3.3	224	318
New South Wales	443	74,032	25,887	99,919	225.6	7,567	3.9	295	3.3	249	339
Queensland	254	22,769	15,818	38,587	151.9	6,360	3.9	250	3.3	207	328
South Australia	203	39,084	7,844	46,928	231.2	7,652	3.8	288	3.3	249	336
Tasmania	175	42,278	16,488	58,766	335.8	6,033	4.1	249	3.4	208	294
Western Australia	121	26,102	4,134	30,236	249.9	7,816	3.7	290	3.1	246	337
Australia	3,173	511,923	195,896	707,819	223.1	6,881	4.0	272	3.3	229	322
Victorian regions											
Northern	741	105,788	44,626	150,414	203.0	7,272	4	288	3.3	242	331
Eastern	704	115,375	44,305	159,680	226.8	6,243	4	251	3.4	210	313
Western	532	86,495	36,794	123,289	231.7	6,589	4.1	268	3.4	222	311

Table 1a : National Totals and Production Averages 1999 to 2013.

Year	Number of Herds	Herds and Cows Recorded				Production Averages					
		Included in Averages	Excluded from Averages	Total Cows	Herd Size	Milk litres	Fat %	Fat kg	Protein %	Protein kg	Lactation Length days
1999/2000	6,976	947,104	81,129	1,028,233	147.4	5,691	4	230	3.3	187	302
2000/2001	7,405	940,712	286,248	1,226,960	165.7	5,682	4	229	3.3	186	302
2001/2002	6,930	888,497	303,269	1,191,766	172	6,027	4	243	3.3	200	307
2002/2003	6,358	842,113	335,786	1,177,899	185.3	5,877	4	235	3.3	193	303
2003/2004	5,704	722,074	298,727	1,020,801	179	6,048	4.0	242	3.3	201	310
2004/2005	5,080	725,374	224,352	949,726	187	6,257	4.0	251	3.3	207	314
2005/2006	4,746	701,852	208,536	910,388	191.8	6,402	4.0	255	3.3	212	316
2006/2007	4,462	655,212	222,592	877,804	196.7	6,452	4.0	257	3.3	216	312
2007/2008	3,966	578,263	207,199	785,462	198	6,596	4.0	264	3.3	220	321
2008/2009	3,779	566,029	206,694	772,723	204.5	6,645	4.1	270	3.4	223	318
2009/2010	3,503	522,869	201,400	724,269	206.8	6,680	4.0	270	3.3	223	323
2010/2011	3,359	518,675	186,915	705,590	210.1	6,813	4.0	273	3.3	228	323
2011/2012	3,301	525,908	205,174	731,082	221.5	6,930	4.0	274	3.3	231	324
2012/2013	3,173	511,923	195,896	707,819	223.1	6,881	4.0	272	3.3	229	322

National Herd Recording Statistics 2012-2013

Table 2: Number of herds in fat production categories by region.

State	Total herds	Average fat production (kg per cow)									
		< 125	125-149	150-174	175-199	200-224	225-249	250-274	275-299	300-324	> 324
Victoria	1,977	36	34	65	115	159	285	330	311	194	145
New South Wales	443	2	5	7	21	25	46	73	82	59	66
Queensland	254	7	3	8	17	36	27	21	16	7	17
South Australia	203	1	2	6	6	12	24	37	36	29	39
Tasmania	175	5	3	4	16	22	27	22	14	16	19
Western Australia	121	0	0	0	2	7	11	17	23	28	22
Australia	3,173	51	47	90	177	261	420	500	482	333	308
Victorian regions											
Northern	741	3	11	11	26	41	55	117	139	107	83
Eastern	704	16	9	39	52	76	149	133	106	37	18
Western	532	17	14	15	37	42	81	80	66	50	44

Table 3: Number of herds in protein production categories by region.

State	Total herds	Average protein production (kg per cow)									
		< 100	100-124	125-149	150-174	175-199	200-224	225-249	250-274	275-299	> 299
Victoria	1,977	35	52	85	166	284	373	307	204	120	48
New South Wales	443	2	6	10	30	50	71	87	60	40	30
Queensland	254	5	5	14	23	40	32	20	9	5	6
South Australia	203	2	1	6	13	22	34	33	43	27	11
Tasmania	175	5	4	10	29	30	18	14	15	9	14
Western Australia	121	0	0	1	3	9	16	36	25	14	6
Australia	3,173	49	68	126	264	435	544	497	356	215	115
Victorian regions											
Northern	741	5	11	18	37	67	125	125	113	66	26
Eastern	704	15	22	40	84	137	151	109	45	25	7
Western	532	15	19	27	45	80	97	73	46	29	15

Herd recorded cows produced 38% more than their non-herd recorded contemporaries in 2013.

Source: Australian Dairy Industry in Focus 2013 and ADHIS 2013.

Table 4: Production averages by age group.

Age group	Number of cows	Production averages					Lactation length days
		Milk litres	Fat %	Fat kg	Protein %	Protein kg	
2 Year Old	86,697	6,067	3.92	238	3.32	201	326
3 Year Old	90,257	6,720	3.94	265	3.36	226	323
Mature Cow	334,969	7,135	3.97	283	3.32	237	321
Total	511,923	6,881	3.96	272	3.33	229	322

Table 5: Production averages by age group and mating type.

Age group	Number of cows	Average fat (kg)		Average protein (kg)	
		Artificially bred stock	Naturally bred stock	Artificially bred stock	Naturally bred stock
2 Year Old	86,697	244	224	208	186
3 Year Old	90,257	274	247	235	208
Mature Cow	334,969	298	265	250	221
Total	511,923	283	257	239	214

Table 6 : Production averages by percentage of artificially bred cows in herds.

Percentage of artificially bred cows in herd	Number of herds	Production averages		
		Milk litres	Fat kg	Protein kg
< 10	537	5,855	238	198
10-19	146	6,362	252	211
20-29	155	6,538	263	219
30-39	182	6,759	265	224
40-49	208	6,692	264	222
50-59	288	7,024	274	232
60-69	326	7,019	278	232
70-79	382	7,199	284	239
80-89	391	7,324	287	243
> 89	558	7,238	286	241
Total	3,173	6,881	272	229

Annual milksolids yield/cow declined from 505 kg to 501 kg. It has been 14 years since the last annual decline occurred. Over the past ten years, milksolids production per cow increased 13%.

Table 7: Production averages by breed.

Breed	Number of cows	Production averages					
		Milk litres	Fat %	Fat kg	Protein %	Protein kg	Lactation length days
Holstein	333,126	7,400	3.83	283	3.26	241	327
Jersey	56,261	5,275	4.77	252	3.70	195	312
Holstein/Jersey Cross	23,900	6,138	4.35	267	3.50	215	309
Guernsey	1,226	5,604	4.38	246	3.42	192	334
Ayrshire	2,943	5,642	4.10	231	3.37	190	310
Dairy Shorthorn	366	5,385	3.88	209	3.28	177	310
Illawarra	5,462	6,389	3.97	254	3.30	211	317
Unknown Breed	72,784	6,243	3.97	248	3.35	209	312
Simmental	96	5,874	3.91	229	3.28	192	320
Red Poll	64	3,222	5.13	165	3.84	124	288
Meuse-Rhine-Issel	63	5,805	4.08	237	3.58	208	306
Aust Milking Zebu	6	7,656	3.84	294	3.30	252	322
Commercial Dairy	34	5,029	3.99	201	3.36	169	294
Aust Red Breed	12,073	6,232	4.10	255	3.43	214	310
Sahiwal	0	0	0.00	0	0.00	0	0
Brown Swiss	3,505	6,385	4.03	257	3.43	219	327
Aust Friesian Sahiwal	14	7,718	4.00	309	3.29	254	342
Total	511,923	6,881	3.96	272	3.33	229	322

A small movement in breed distribution occurred. Red breed group and Jersey are up by 1% and Holstein down by 2% compared to the previous year.

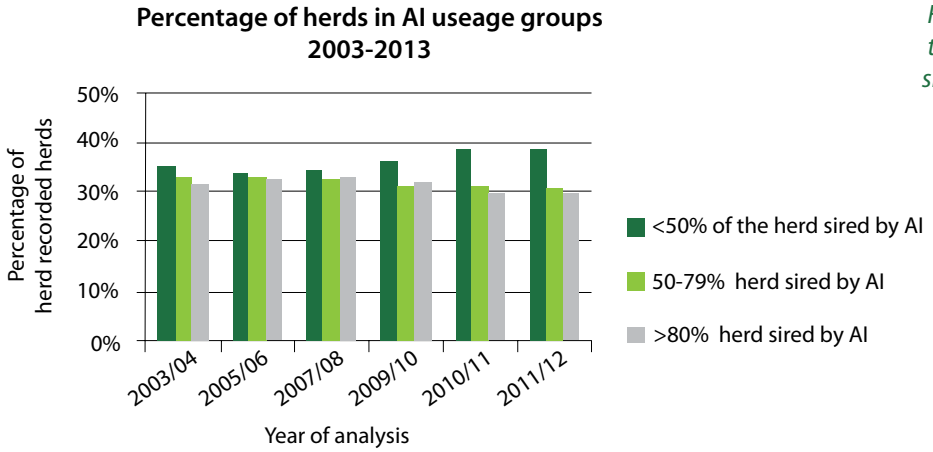


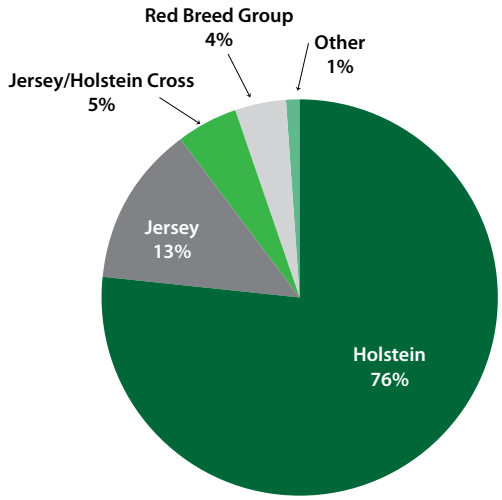
Figure 6: Herds with less than 50% replacements sired by AI has increased over the past decade.

50% of Australia's 6,400 dairy farms participate in herd testing.

Table 8: Production averages by month of calving.

Month of calving	Number of cows	% of total	Production averages					Lactation length days
			Milk litres	Fat %	Fat kg	Protein %	Protein kg	
January	15,941	3.1	7,305	3.87	283	3.29	240	342
February	27,584	5.4	7,380	3.86	285	3.32	245	338
March	51,621	10.1	7,312	3.90	285	3.34	244	336
April	54,672	10.7	7,205	3.91	282	3.35	241	333
May	47,908	9.4	7,044	3.93	277	3.34	235	323
June	39,151	7.6	6,776	3.96	268	3.34	226	316
July	55,602	10.9	6,429	4.03	259	3.36	216	311
August	88,382	17.3	6,562	4.06	267	3.35	220	307
September	68,459	13.4	6,718	3.98	268	3.31	222	316
October	33,695	6.6	6,813	3.94	268	3.27	222	323
November	16,107	3.1	6,831	3.93	268	3.26	222	334
December	12,801	2.5	7,145	3.88	277	3.25	232	344
Australia	511,923	100	6,881	3.96	272	3.33	229	322

Figure 7: Distribution of breeds.



Farmers often express a sense of satisfaction that comes from seeing healthy, productive older cows in their herd while frustration builds when younger cows need to be culled for various reasons.

To further understand trends in age at first calving and longevity in the Australian herd, ADHIS analysed the age of herd recorded cows and the results are presented in Figures 8-10.

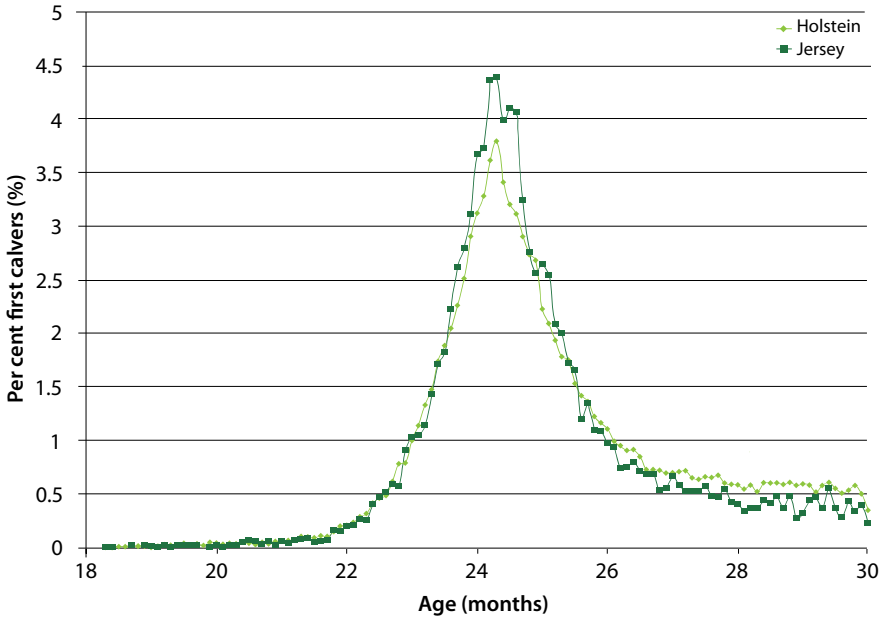


Figure 8: Age at first calving of Holstein and Jersey cows.

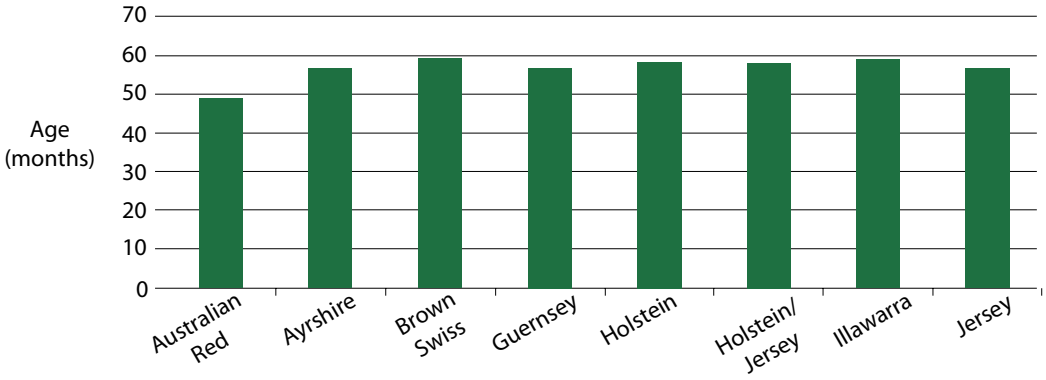


Figure 9: Average age of cows at their most recent calving.

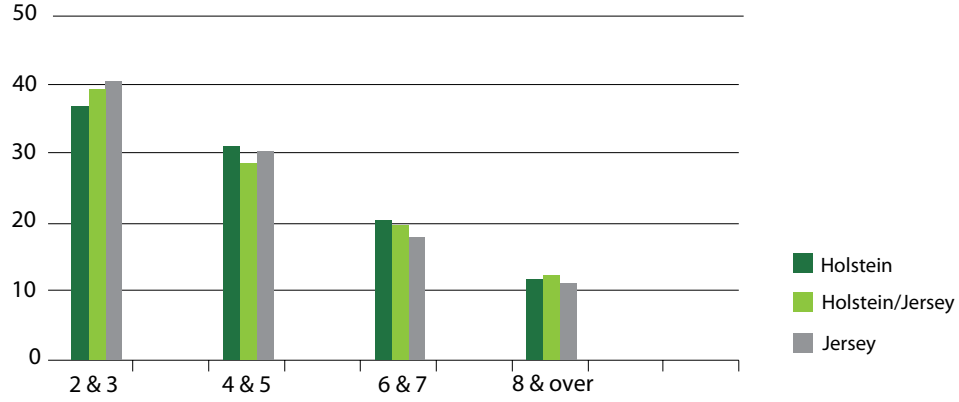


Figure 10: Age distribution of herd recorded cows by breed (at most recent calving).

AI and herd tests comprise an average of 2.1% of total farm costs.

**Source: DEPI Dairy Farm Monitor Project 2012/13.*

Table 9: Production averages by breed, age group, mating type and registration.

Breed	Type	Number of cows	Production averages					
			Milk litres	Fat %	Fat kg	Protein %	Protein kg	Lactation length days
Holstein	2-year old	59,475	6,499	3.77	245	3.26	212	331
	3-year old	61,590	7,197	3.79	273	3.28	236	329
	Mature cow	212,061	7,712	3.85	297	3.26	251	326
	Total	333,126	7,400	3.83	283	3.26	241	327
	Artifically bred	232,541	7,600	3.80	289	3.26	247	330
	Naturally bred	100,585	6,938	3.88	269	3.27	227	322
	Pure bred	58,523	8,301	3.73	310	3.21	266	347
	Grade	274,603	7,209	3.85	277	3.27	236	323
Jersey	2-year old	11,138	4,740	4.71	223	3.63	172	316
	3-year old	11,003	5,130	4.77	245	3.72	191	313
	Mature cow	34,120	5,497	4.78	263	3.71	204	311
	Total	56,261	5,275	4.77	252	3.70	195	312
	Artifically bred	36,318	5,406	4.82	261	3.72	201	314
	Naturally bred	19,943	5,037	4.66	235	3.64	184	310
	Pure bred	13,290	5,720	4.87	278	3.74	214	326
	Grade	42,971	5,137	4.74	243	3.68	189	308
Holstein/Jersey Cross	2-year old	4,856	5,280	4.36	230	3.48	184	311
	3-year old	4,544	6,068	4.34	264	3.56	216	309
	Mature cow	14,500	6,448	4.35	280	3.49	225	308
	Total	23,900	6,138	4.35	267	3.50	215	309
	Artifically bred	9,886	6,428	4.36	280	3.52	226	311
	Naturally bred	14,014	5,934	4.34	258	3.49	207	307
	Pure bred	0	0	0	0	0	0	0
	Grade	23,900	6,138	4.35	267	3.50	215	309
Guernsey	2-year-old	209	5,003	4.29	215	3.32	166	351
	3-year-old	239	5,205	4.51	235	3.47	181	325
	Mature cow	778	5,888	4.38	258	3.44	203	332
	Total	1,226	5,604	4.38	246	3.42	192	334
	Artifically bred	513	5,662	4.35	246	3.38	191	333
	Naturally bred	713	5,562	4.40	245	3.45	192	334
	Pure bred	183	5,868	4.20	247	3.30	194	357
	Grade	1,043	5,558	4.42	245	3.44	191	330
Ayrshire	2-year-old	449	4,911	4.20	207	3.39	167	326
	3-year-old	571	5,453	4.18	228	3.40	185	314
	Mature cow	1,923	5,868	4.05	238	3.36	197	305
	Total	2,943	5,642	4.10	231	3.37	190	310
	Artifically bred	1,612	5,825	4.14	241	3.42	199	313
	Naturally bred	1,331	5,420	4.04	219	3.32	180	307
	Pure bred	729	6,111	4.07	249	3.33	203	330
	Grade	2,214	5,487	4.10	225	3.39	186	303

Table 9: Production averages by breed, age group, mating type and registration (continued).

Breed	Type	Number of cows	Production averages					
			Milk litres	Fat %	Fat kg	Protein %	Protein kg	Lactation length days
Illawarra	2-year-old	841	5,663	4.02	228	3.28	186	329
	3-year-old	1,228	5,978	3.95	236	3.31	198	320
	Mature cow	3,393	6,718	3.96	266	3.30	222	312
	Total	5,462	6,389	3.97	254	3.30	211	317
	Artifically bred	2,830	6,640	3.99	265	3.30	219	320
	Naturally bred	2,632	6,119	3.94	241	3.29	201	313
	Pure bred	1,767	6,817	3.88	264	3.25	221	324
	Grade	3,695	6,184	4.02	249	3.33	206	313
Unknown Breed	2-year-old	6,248	5,409	3.99	216	3.35	181	311
	3-year-old	7,426	6,114	4.00	245	3.40	208	310
	Mature cow	59,110	6,347	3.96	252	3.34	212	313
	Total	72,784	6,243	3.97	248	3.35	209	312
	Artifically bred	1,186	6,998	3.89	273	3.35	234	318
	Naturally bred	71,598	6,231	3.97	247	3.35	209	312
	Pure bred	0	0	0	0	0	0	0
	Grade	72,784	6,243	3.97	248	3.35	209	312
Aust. Red Breed	2-year-old	2,936	5,485	4.07	223	3.40	186	313
	3-year-old	2,768	6,093	4.13	251	3.45	210	312
	Mature cow	6,369	6,637	4.10	272	3.43	228	307
	Total	12,073	6,232	4.10	255	3.43	214	310
	Artifically bred	11,029	6,281	4.10	257	3.43	215	310
	Naturally bred	1,044	5,713	4.12	235	3.42	195	309
	Pure bred	994	7,014	3.95	277	3.43	240	320
	Grade	11,079	6,162	4.11	253	3.43	211	309
Brown Swiss	2-year-old	463	5,786	3.86	224	3.34	193	340
	3-year-old	756	6,002	4.00	240	3.45	207	329
	Mature cow	2,286	6,633	4.06	269	3.43	227	323
	Total	3,505	6,385	4.03	257	3.43	219	327
	Artifically bred	2,383	6,373	4.10	262	3.45	220	327
	Naturally bred	1,122	6,410	3.85	247	3.36	215	327
	Pure bred	1,232	6,672	4.00	267	3.46	231	344
	Grade	2,273	6,230	4.04	252	3.40	212	318
Other Breeds	2-year-old	82	4,858	3.76	183	3.23	157	326
	3-year-old	132	5,440	3.91	213	3.33	181	311
	Mature cow	429	5,397	4.06	219	3.38	182	304
	Total	643	5,337	4.04	213	3.37	179	309
	Artifically bred	298	6,077	3.92	238	3.35	203	304
	Naturally bred	345	4,698	4.07	191	3.35	157	312
	Pure bred	34	4,959	3.92	194	3.33	165	330
	Grade	609	5,358	4.00	214	3.35	180	307

Table 10: Distribution of calvings by month and region.

State	Percentage of cows that calved each month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Victoria	1	4	11	12	10	8	12	19	14	6	2	1
New South Wales	8	9	11	9	9	8	9	10	9	7	6	6
Queensland	8	9	10	9	9	9	9	8	8	7	7	7
South Australia	6	9	11	11	9	6	6	11	12	9	6	4
Tasmania	1	2	4	7	7	3	11	34	20	7	2	1
Western Australia	8	11	12	10	9	6	5	9	12	6	5	6
Australia	3	5	10	11	9	8	11	17	13	7	3	3
Victorian regions												
Northern	1	3	14	14	8	3	7	21	17	8	3	2
Eastern	1	3	9	9	6	7	18	24	15	5	1	1
Western	2	5	9	12	17	17	12	10	9	4	2	1

Table 11: Production averages of stud cows.

Breed	Number of cows	Production averages					
		Milk litres	Fat %	Fat kg	Protein %	Protein kg	Lactation length days
Holstein	58,523	8,301	3.73	310	3.21	266	347
Jersey	13,290	5,720	4.87	278	3.74	214	326
Guernsey	183	5,868	4.20	247	3.30	194	357
Ayrshire	729	6,111	4.07	249	3.33	203	330
Illawarra	1,767	6,817	3.88	264	3.25	221	324
Aust Red Breed	994	7,014	3.95	277	3.43	240	320
Brown Swiss	1,232	6,672	4.00	267	3.46	231	344
Total	76,718	7,750	3.94	301	3.31	255	342

Table 12: Production averages of artificially bred stud cows.

Breed	Number of cows	Production averages					
		Milk litres	Fat %	Fat kg	Protein %	Protein kg	Lactation length days
Holstein	47,554	8,391	3.72	312	3.21	269	348
Jersey	10,604	5,797	4.87	282	3.75	217	326
Guernsey	101	6,040	4.17	252	3.24	195	356
Ayrshire	396	6,340	4.03	256	3.31	210	334
Illawarra	881	7,075	3.90	276	3.23	229	331
Aust Red Breed	959	7,012	3.95	277	3.43	240	320
Brown Swiss	889	6,683	4.03	270	3.47	232	345
Total	61,384	7,861	3.93	305	3.31	258	343

Table 13: Victorian production averages 1930/1931 – 2012/2013.

Year	Total herds	Total cows	Herd size	Production averages				
				Milk litres	Fat %	Fat kg	Protein %	Protein kg
1930/1935	2,984	91,328	31	2,295	4.7	107		
1935/1940	2,324	80,883	35	2,210	4.9	108		
1940/1945	1,082	39,368	36	2,154	4.9	105		
1945/1950	2,329	90,015	39	2,301	5.0	114		
1950/1955	3,192	141,387	44	2,284	5.0	114		
1955/1960	3,461	187,306	54	2,485	5.1	126		
1960/1965	4,003	248,791	62	2,643	5.0	132		
1965/1970	5,041	368,300	73	2,793	4.9	137		
1970/1975	4,314	382,925	89	2,942	4.7	139		
1975/1980	2,456	256,744	105	3,159	4.5	143		
1980/1985	3,913	423,120	108	3,471	4.5	155		
1985/1990	4,399	527,240	120	4,047	4.4	180	3.3	134
1990/1991	4,402	568,885	129	4,245	4.4	186	3.4	142
1991/1992	4,061	517,760	128	4,477	4.4	196	3.4	150
1992/1993	4,293	552,445	129	4,708	4.4	205	3.4	158
1993/1994	4,606	604,160	131	4,962	4.3	212	3.3	166
1994/1995	4,591	574,674	125	4,976	4.2	210	3.3	164
1995/1996	4,685	606,198	129	5,142	4.2	215	3.3	169
1996/1997	4,928	619,470	126	4,984	4.2	208	3.3	163
1997/1998	4,328	624,428	144	5,084	4.1	208	3.3	167
1998/1999	4,156	641,106	154	5,350	4.1	220	3.3	177
1999/2000	3,904	622,281	159	5,570	4.1	227	3.3	184
2000/2001	4,267	761,219	178	5,527	4.0	223	3.3	182
2001/2002	4,198	757,029	180	5,969	4.0	240	3.3	198
2002/2003	3,831	738,329	193	5,705	4.0	230	3.3	187
2003/2004	3,414	624,002	183	5,841	4.0	236	3.3	194
2004/2005	3,079	586,566	191	6,083	4.0	245	3.3	202
2005/2006	2,933	572,906	195	6,205	4.0	248	3.3	206
2006/2007	2,775	554,136	200	6,245	4.0	250	3.4	209
2007/2008	2,431	484,030	199	6,423	4.0	259	3.3	215
2008/2009	2,313	478,612	207	6,458	4.1	266	3.4	218
2009/2010	2,127	437,811	206	6,443	4.1	265	3.4	217
2010/2011	2,036	428,660	211	6,588	4.1	268	3.4	222
2011/2012	2,050	453,465	221	6,731	4.0	270	3.4	226
2012/2013	1,977	433,383	219	6,694	4.0	268	3.3	224

Australian Breeding Values

Over the past decade, about one third of productivity improvements achieved by Australian farmers are credited to better genetics. Since 1983, farmers have had access to independent information to make breeding choices in the form of Australian Breeding Values (ABVs). ABVs are the best estimate of the genetic merit of animals and reflect the performance of animals in Australian production systems. ABVs are an effective tool to improve the genetic merit of herds.

The 30 year anniversary of the first publication of ABVs was celebrated by farmers and industry throughout 2013. Figure 11 outlines a history of achievement driven by dedicated farmers, researchers and industry personnel. By no means is the task of breeding better cows complete. Collectively, our passion for delivering a world class genetic evaluation system drives our work to apply the latest science, deliver ABVs to more people using their language and strive for even greater usage of Australian Breeding Values across our industry.

Farmers continue to make effective choices in improving their herds' genetic merit for production as demonstrated in Figures 12-14. Each graph illustrates the genetic improvement for Australian Profit Ranking (APR – profit from production and non-production traits) and Australian Selection Index (ASI – profit from production only) for a breed.

Bull selection is the primary source of genetic gain within dairy herds. Following the genetic trend graphs in this section of the report is a list of the 2013 leading proven Australian bulls and the brightest young genomically selected sires.

Finally, Australia's top herds ranked by Australian Profit Ranking complete this year's report. Many years of careful breeding are required to feature in this list. Congratulations to this year's top herds.

Figure 11: A 30-year history of ABV achievements.

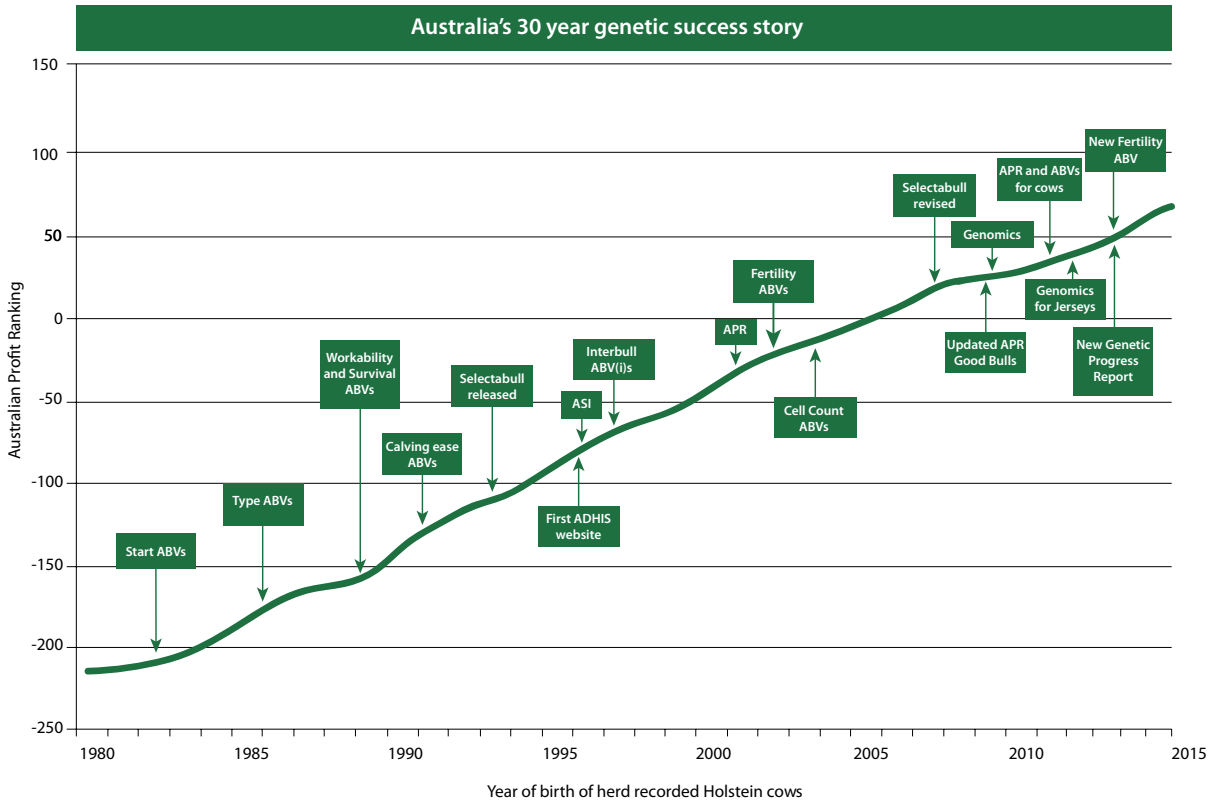
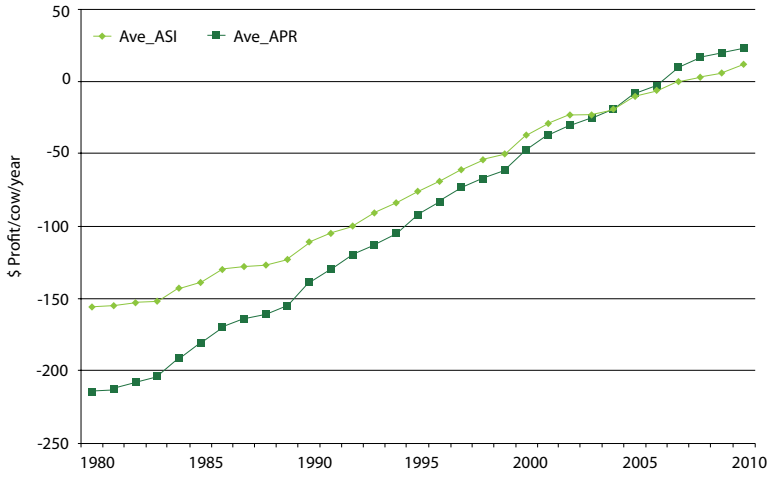
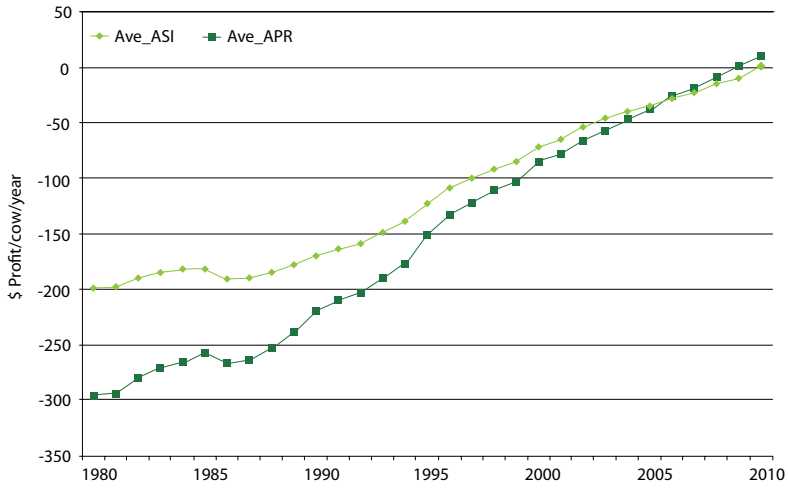


Figure 12: Holstein Cows average APR & ASI by year of birth.



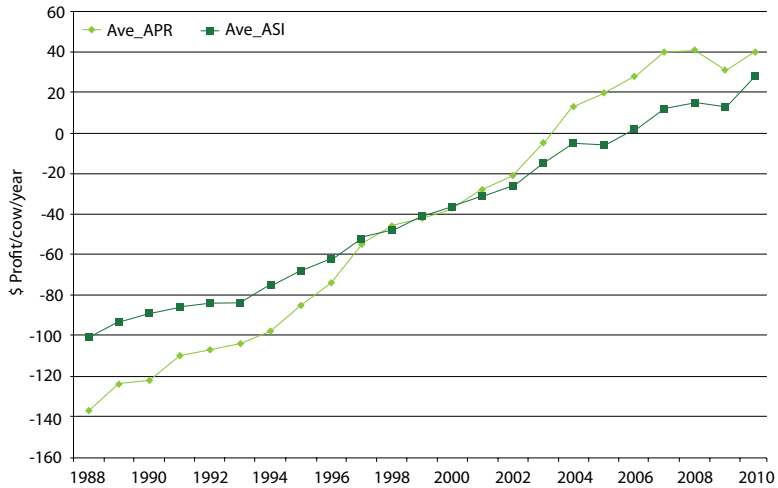
Holsteins are achieving $8.55 profit/cow/year in genetic gain.

Figure 13: Jersey Cows average APR & ASI by year of birth.



Jerseys are achieving $11.12 profit/cow/year in genetic gain.

Figure 14: Red Breed Cows average APR & ASI by year of birth.



Red Breeds are achieving $8.85 profit/cow/year in genetic gain.

2013 Australian Breeding Values – Good Bulls Guide

THE Good Bulls GUIDE

Holstein Profit (Aug 2013) proven Australia

PROFIT RANK	BULL ID	BULL NAME	GENETIC CODES	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	PROFIT		PRODUCTION		AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	LONGEVITY		TYPE			DAUGHTER FERTILITY		SOURCE
						PROFIT $	RELIABILITY	PRODUCTION	RELIABILITY			SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	FERTILITY	RELIABILITY	
1	**CANBEE**	COUNTRY ROAD ROUMARE CANBEE		g	A	**355**	72	304	78	44	21	105	59	107	105	70			ALT
2	**ROUMARE**	ROUMARE		g	A	**314**	95	250	98	396	87	107	89	106	106	96	98	92	CRV
3	**ROUFECTOR**	BUNDALONG ROUFECTOR		g	A	**292**	77	247	83	70	31	107	64	111	108	77	94	63	ALT
4	**SHOLTZ**	ST. CLAIR SHOLTZ-TWIN			A	**285**	73	193	80	49	27	105	58	105	103	72	102	57	ABS
5	**29H012470**	INDIJKS BABYLON	A22	g	A	**283**	81	202	87	75	35	103	68	100	100	75	103	72	ABS
6	**USEAGE**	KAARMONA CALEB	BLF,CVF,A12	g	A	**280**	84	199	90	100	45	108	71	102	109	78	100	77	GAC
7	**WESTGATE**	GALLRAE JOCKO 3438	BLF,CVF,A22	g	A	**274**	82	182	88	93	46	110	67	110	108	78	97	70	GAC
8	**29H012772**	BALLYCAIRN OMAN PELLO		g	A	**271**	80	172	85	51	24	106	69	97	95	80	107	65	ABS
9	**DEANCOX**	MANNA FARM DEANCOX	CVF,BLF,A22	g	A	**268**	82	204	87	87	41	105	67	108	104	77	100	69	GAC
10	**REALM**	ECLIPSE ROUMARE REALM	CVF,BLF,A22	g	A	**264**	74	269	81	58	29	104	59	98	102	70	92	61	GAC
11	**CARMARE**	KAARMONA CARMARE	BLF,CVF,A22	g	A	**264**	74	192	80	45	24	107	60	105	103	72	100	60	GAC
12	**BUDDHA**	BUSHLEA PERFECTOR BOLD-ET	BLF,CVF,A12	g	A	**246**	83	180	89	103	49	104	68	109	106	79	100	68	GAC
13	**DELSANTO**	MANNA FARM DEL SANTO	BLF,CVF,A22	g	A	**243**	83	224	90	95	49	101	66	110	110	64	99	73	GAC
14	**CURIO**	COUNTRY ROAD ROUMARE CURIO	BLF,CVF,A12	g	A	**243**	73	210	79	38	23	105	60	104	102	70			GAC
15	**7H8081**	ENSENADA TABOO PLANET ET	RDF,CVF,BLF,A22	g	A	**238**	94	148	97	398	91	108	86	105	112	95	99	88	GAC
16	**JIFFEY**	RENGAW SHOTTLE JIFFEY		g	A	**225**	77	60	84	65	25	110	61	101	102	72	103	66	AGR
17	**NZGMILLER**	GLENMEAD MILLER	CVF,A12,CNF,BLF	g	A	**224**	86	152	93	152	31	101	73	95	97	78	104	80	LIC
18	**GOLDPIPER**	CLYDEVALE SHOTTLE PERSIS		g	A	**224**	79	140	85	70	37	104	65	100	103	73	104	71	AGR
19	**SHOTTLE**	PICSTON SHOTTLE		g	A	**224**	98	67	99	1853	373	110	95	109	106	99	105	97	ABS
20	**ARCHILLES**	COOMBOONA ROUMARE ARCHILLES	CVF	g	A	**222**	72	160	78	34	19	106	58	102	104	67	99	60	GAC
21	**THROTTLE**	ELMAR THROTTLE	A22	g	A	**222**	84	66	89	104	50	107	71	105	109	82	108	72	ABS
22	**COPIER**	CURRAJUGLE COPIER-ET	A22		A	**220**	81	120	88	93	42	109	63	106	106	73	104	64	GAC
23	**GGJARDIN**	JARDIN		g	A	**210**	97	181	99	1055	143	104	91	96	103	96	100	94	ABS
24	**EUROSTAR**	ECLIPSE EUROSTAR	BLF,CVF,A22	g	A	**207**	83	102	90	117	61	106	65	106	109	73	105	70	GAC
25	**GOLDSMITH**	TOPSPEED H POTTER	CVF,BLF,A22	g	A	**204**	98	216	99	3375	420	102	96	94	91	97	98	98	GAC
26	**QUARTERMILE**	ECLIPSE ROUMARE QUARTERMILE		g	A	**204**	73	141	80	49	21	106	58	106	105	69	101	57	GAC

Holstein Genomic (Aug 2013)

PROFIT RANK	BULL ID	BULL NAME	GENETIC CODES	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	PROFIT		PRODUCTION		AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	LONGEVITY		TYPE			DAUGHTER FERTILITY		SOURCE
						PROFIT $	RELIABILITY	PRODUCTION	RELIABILITY			SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	FERTILITY	RELIABILITY	
1	**ZINGER**	JET STAR JETFINN ZINGER	A22	g	A	**319**	58	301	66	0	0	104	41	106	104	42	95	44	GAC
2	**TENJET**	KANDES M14		g	A	**313**	54	226	63	0	0	105	37	102	102	39	105	40	GAC
3	**JETSHOT**	RENGAW FINN JETSHOT		g	A	**300**	55	267	64	0	0	105	38	103	103	39	97	42	GAC
4	**ROYALMAN**	HINDLEE GOLDWYN OMANROYAL 121003	A12	g	A	**295**	60	158	68	0	0	109	46	104	106	49	107	48	GAC
5	**DIMAGGIO**	BUNDALONG JETSTAR CANBEE DIMAGGIO	A22	g	A	**294**	56	217	65	0	0	106	39	104	103	43	100	40	GAC
6	**SOLACE**	ECLIPSE ROUMARE SOLACE	CVF	g	A	**292**	69	228	76	18	9	107	54	102	98	56	100	56	GAC
7	**PERFECTGOLD**	KAARMONA PERFECT GOLD		g	A	**284**	54	162	63	0	0	107	38	101	102	40	104	41	GAC
8	**PICOLA**	ADLEJAMA DELSANTO PICOLA	A22	g	A	**281**	58	209	67	0	0	104	41	104	107	43	103	45	GAC
9	**JAKOVICH**	RENGAW CROWN JAKOVICH		g	A	**271**	54	176	64	0	0	107	37	100	100	40	102	41	AGR
10	**JUSTLE**	RENGAW MOM JUSTLE		g	A	**271**	54	152	63	0	0	108	37	99	100	39	106	40	AGR
11	**CRVGLAMORGAN**	GLAMORGAN FREDDIE TIFFANY		g	A	**268**	55	199	64	0	0	103	38	100	102	39	104	41	CRV
12	**CAPEFINN**	KAARMONA CAPEFINN	A22	g	A	**267**	62	240	70	0	0	102	46	102	101	48	98	50	GAC
13	**DUNKED**	ADLEJAMA CRACKAJACK DUNK		g	A	**266**	55	215	64	0	0	104	38	102	102	40	99	41	GAC
14	**MACCABOY**	P.J. PARK WYMAN MAC		g	A	**266**	54	195	63	0	0	106	36	98	98	38	102	39	GAC
15	**JENGOLD**	EMU BANKS JENGOLD		g	A	**266**	54	170	63	0	0	104	36	99	99	39	107	40	GAC

*Denotes an ABV that incorporates Australian data, all other traits for this bull are ABV(i)s using data from foreign daughters.

The bull must meet minimum requirements for reliability, is active and more than 1 standard deviation above average for Profit $.

For the full list go to **www.adhis.com.au**

2013 Australian Breeding Values – Good Bulls Guide

Jersey Profit (Aug 2013) proven Australia

RANK	BULL ID	BULL NAME	GENETIC CODES	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	PROFIT		PRODUCTION		AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	LONGEVITY		TYPE			DAUGHTER FERTILITY		SOURCE
						PROFIT $	RELIABILITY	PRODUCTION $	RELIABILITY			SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	FERTILITY	RELIABILITY	
1	**SANDBLAST**	NOWELL SANDBLAST	A22	g	A	**320**	82	246	88	96	28	100	68	108	112	77	106	70	AGR
2	**TBONE**	RICHIES JACE TBONE A364	A22		A	**278**	83	212	88	73	27	107	72	119	115	83	100	78	AGR
3	**ELTON**	CAIRNBRAE JACES ELTON		g	A	**272**	93	219	98	1,098	199	105	79	110	107	90	98	87	ABS
4	**TENGEN**	MOROKA TENGEN		g	A	**261**	69	221	77	35	15	103	54	101	103	64			GAC
5	**LARFALOT**	LIGHTWOOD LUCRATIVE	A22	g	A	**242**	94	189	98	1,045	216	106	81	111	105	92	97	86	GAC
6	**VANAHLEM**	PANNOO ABE VANAHLEM		g	A	**229**	76	162	83	51	27	107	62	125	118	72	99	65	ALT
7	**GAINFUL**	KAARMONA GALEAO	A12	g	A	**201**	82	167	88	84	46	105	67	114	112	72	93	72	GAC
8	**TAILBOARD**	NOWELL TARSAN		g	A	**198**	97	157	99	1,263	241	102	92	106	103	89	99	95	GAC
9	**VAVOOM**	ROCKLEIGH PARK VALERIAN VAVOOM		g	A	**195**	73	200	81	58	22	102	56	101	99	65	98	57	ABS
10	**DELIAN**	LOXLEIGH DELIAN	A22	g	A	**187**	75	180	82	68	38	104	57	115	109	66	97	59	GAC
11	**AMBMANHATTEN**	OKURA MANHATTEN-ET SJ3		g	A	**185**	98	203	99	1,747	247	100	95	98	94	95	97	97	CRV
12	**VALERAGAY**	BROADLIN 2429 VALERIAN		g	A	**164**	73	148	81	59	30	102	55	104	99	63	99	58	GAC
13	**FRONTIER**	BEULAH FRONTIER		g	A	**156**	70	116	78	41	21	104	54	101	98	63			GAC
14	**BAKARI**	MELDAN BAKARI	A22	g	A	**147**	78	152	86	89	43	100	59	98	102	63	94	65	GAC
15	**BARTPOWER**	DARAWAY FLOWERPOWER SATIRA	A22	g	A	**146**	95	60	98	659	189	107	86	114	115	90	102	89	GAC
16	**SPIRITUAL**	RIVERSIDE SPIRIT	A22	g	A	**142**	96	65	99	1,869	300	107	87	108	106	93	102	93	AGR
17	**SARATOGA**	BERCAR SARATOGA		g	A	**137**	95	68	98	470	150	106	87	102	101	85	102	91	GAC
18	**PASSIVE**	BERCAR PASSIVE		g	A	**136**	97	93	99	1,146	232	106	94	104	102	92	100	96	GAC
19	**JURACE**	KAARMONA JURACE		g	A	**130**	84	91	91	143	46	104	67	104	102	69	95	73	WWS
20	**BADGER**	BEULAH TARANAK BADGER	A12	g	A	**130**	98	68	99	3,308	471	107	97	109	103	97	98	98	GAC
21	**ALTAGALAXIES**	GALAXIES CELEBRITY			A	**130**	88	27	94	249	58	108	75	120	112	85	101	79	ALT
22	**NZGBANGA**	LOXLEA ACL OSWALD	A22	g	A	**126**	88	120	94	155	33	99	75	89	94	79	100	80	LIC
23	**JEJEEP**	KAARMONA JEEP		g	A	**125**	87	82	93	153	51	105	74	103	101	83	98	75	SEM
24	**BOSREFUTE**	WALLACEDALE VIOLETS REFUTE		g	A	**123**	82	128	90	122	41	103	63	108	108	68	92	69	CRV
25	**MAXIMUM**	SUNSET CANYON MAXIMUM		g	A	**123**	91	64	96	258	54	105	82	109	102	86	100	88	AGR

Jersey Genomic (Aug 2013)

RANK	BULL ID	BULL NAME	GENETIC CODES	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	PROFIT		PRODUCTION		AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	LONGEVITY		TYPE			DAUGHTER FERTILITY		SOURCE
						PROFIT $	RELIABILITY	PRODUCTION $	RELIABILITY			SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	FERTILITY	RELIABILITY	
1	**RACEWAY**	ABERDEEN VALERIAN SANDOWN-ET	A22	g	A	**287**	67	258	76	17	6	105	48	110	109	51	97	50	GAC
2	**SANDSTORM**	KADDY ELTON SANDSTORM		g	A	**280**	59	263	66	0	0	103	44	102	100	48	94	48	TLG
3	**LEVIGENES**	BROADLIN LEVI	A12	g	A	**280**	49	241	58	0	0	105	32	113	109	36	98	34	GAC
4	**BOSGREGSTAR**	WHITE STAR GREG		g	A	**273**	52	239	61	0	0	106	36	109	105	39	98	39	CRV
5	**CRVBRAX**	PANNOO BRAX		g	A	**266**	47	195	57	0	0	107	29	124	116	34	99	32	CRV
6	**JULSTAR**	WHITE STAR 5281 JULIAN	A22	g	A	**265**	49	204	58	0	0	103	33	112	111	36	104	36	GAC
7	**NAVARIAN**	COLNARCO NAVARIAN	A12	g	A	**257**	69	209	77	37	20	105	51	114	115	58	98	47	GAC
8	**0200JE08165**	BROADLIN HATMAN	A22	g	A	**256**	54	207	62	0	0	104	38	111	110	42	100	40	SEM
9	**BORAT**	BROOKBORA TBONE BORAT	A22	g	A	**256**	48	187	57	0	0	106	29	108	106	32	98	32	GAC
10	**SHAQ**	NOWELL SHAQ		g	A	**255**	54	200	62	0	0	105	39	108	106	43	100	42	HUO
11	**GIZERIAN**	COLNARCO GIZERIAN		g	A	**254**	46	220	54	0	0	103	30	105	105	32	100	33	AGR
12	**CRVSANDRIFT**	KADDY ELTON SANDRIFT		g	A	**250**	58	222	66	0	0	104	42	107	104	46	96	46	CRV
13	**CSCTRESBON**	GELBEADO PARK BOLTON		g	A	**250**	49	191	58	0	0	104	32	107	105	37	98	36	ABS
14	**CSCBABAXI**	KAARMONA VANHLEM BABAXI		g	A	**250**	46	174	56	0	0	107	28	121	114	32	102	30	ABS
15	**CSCEDISON**	CAIRNBRAE TBONE EDISON		g	A	**248**	52	198	60	0	0	104	35	104	105	39	100	38	ABS

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2013 Australian Breeding Values – Good Bulls Guide

Red Breeds Profit (Aug 2013) proven Australia

RANK	BULL ID	BULL NAME	GENETIC CODES	AUSTRALIAN PROVEN OR INTERNATIONAL	PROFIT		PRODUCTION		AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	LONGEVITY		TYPE			DAUGHTER FERTILITY		SOURCE
					PROFIT $	RELIABILITY	PRODUCTION	RELIABILITY			SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	CELL COUNT	RELIABILITY	
1	**RANDERSDAVID**	R DAVID		A	**235**	81	99	88	67	16								VIK
2	**VRSOLERO2851**	VR SOLERO		A	**217**	69	194	79	28	10	100	42						VIK
3	**PETERSLUND**	PETERSLUND 1213	A11	A	**195**	96	101	98	751	107	108	91	94	94	85	104	95	VIK
4	**ARBBONJOVI**	BOSGOWAN BON JOVI	A22	A	**187**	84	133	91	128	62	105	66	111	105	71	104	71	GAC
5	**ARBPOTSIE**	GRAZIN POTSIE	A12	A	**185**	83	138	91	121	51	103	62	97	93	65	106	69	GAC
6	**ARBBOBDOWN**	LODEN BOB	A12	A	**166**	92	170	98	873	176	104	73	110	104	79	97	83	GAC
7	**ARBLIPPMAN**	BOSGOWAN LIPPMAN	A11	A	**160**	80	125	90	122	40	103	55	108	109	51	100	66	GAC
8	**ANDERSTA1967**	ANDERSTA 1967	A22,POC	A	**150**	88	92	94	194	31	105	73				102	84	VIK
9	**ARBFROSTY**	MERIBEN PARK JACK FROST	A22	A	**143**	76	98	85	84	35	102	58	104	106	62	100	51	GAC
10	**ARBLEX**	BEAULANDS LORRY	A22	A	**140**	82	101	90	111	53	106	61	118	109	59	102	71	GAC
11	**ARBLINDBERG**	LOUVIC LOOT	A12	A	**134**	79	78	88	86	44	104	58	106	102	63	103	63	GAC
12	**ARBLAWRENCE**	BOSGOWAN LAWRENCE	A12	A	**130**	97	38	99	1558	282	107	93	107	101	88	105	96	GAC
13	**ARBEROS**	ARAJARRA EROS	A12	A	**129**	81	58	90	105	45	104	58	98	98	57	105	69	GAC
14	**ARBSUNNY**	BEAULANDS SUNNY	A22	A	**124**	92	107	97	519	103	104	80	106	102	80	101	87	GAC
15	**NZLCHALLENGE**	KILFENNAN CHALLENGE	A12	A	**124**	94	83	98	857	74	105	84				100	94	LIC

Guernsey Profit (Aug 2013) proven Australia

RANK	BULL ID	BULL NAME	AUSTRALIAN PROVEN OR INTERNATIONAL	PROFIT		PRODUCTION		AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	LONGEVITY		TYPE			DAUGHTER FERTILITY		SOURCE
				PROFIT $	RELIABILITY	PRODUCTION	RELIABILITY			SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	FERTILITY	RELIABILITY	
1	**ICYICEBERG**	SPRING WALK ICY ICEBERG	I	**146**	57	151	69			101	44	104	102	54	100	55	AGR
2	**7G398**	SNIDERS RONALDS ALSTAR	I	**125**	52	68	63			102	38	104	101	50	108	58	GAC
3	**7G405**	GOLDEN J RONALD GRUMPY	I	**124**	51	90	62			103	36	106	104	49	99	55	GAC
4	**BOSGEO**	GOLDEN J LES GEORGE	I	**123**	47	104	57			103	32	107	105	46	98	45	AGR
5	**AUSFAYSBOO**	KOOKABURRA FAYS BOO	A	**114**	74	58	87	87	30	108	54				97	65	WAS

Brown Swiss Profit (Aug 2013) proven Australia

RANK	BULL ID	BULL NAME	AUSTRALIAN PROVEN OR INTERNATIONAL	PROFIT		PRODUCTION		AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	LONGEVITY		DAUGHTER FERTILITY		SOURCE
				PROFIT $	RELIABILITY	PRODUCTION $	RELIABILITY			SURVIVAL	RELIABILITY	CELL COUNT	RELIABILITY	
1	**GGEVENT**	EVENT	A	**151**	74	77	88	90	28	108	54	99	63	ABS
2	**GGVID**	VIDEO	A	**104**	69	42	84	63	11	103	40	108	52	ABS
3	**SWISSEDGE**	ELM PARK JUPITERS EDGE	A	**104**	86	36	96	313	82	102	74	106	82	GAC
4	**GGHURAY**	HURAY	A	**84**	53	68	71	42	8					ABS
5	**GGEASTWOOD**	EASTWOOD	A	**62**	51	70	68	34	18					ABS

The bull must meet minimum requirements for reliability, is active and more than 1 standard deviation above average for Profit $.
For the full list go to **www.adhis.com.au**

2013 Australian Breeding Values – Top Herd Summary

Top Holstein herds based on herd average APR, August 2013 ABVs														
APR rank	Owner name	Address	Post code	National Herd ID	Cows on file	Current cows	No. of (g) cows	APR	ASI	Prot. ABV	Prot % ABV	Milk ABV	Fat ABV	Fat % ABV
1	Dickson BJ & JL	Terang	3264	850441U	2,708	728	221	113	92	16	0.06	470	14	-0.09
2	Hogg A & J	Biggara	3707	C00155U	827	163	23	111	96	14	0.12	263	16	0.06
2	Parrish TJ & LR	Barrengarry	2577	N00544Q	1,255	213	18	111	81	12	0.06	314	16	0.04
4	Henry TW & TC	Tinamba	3859	240108T	2,352	567	314	110	88	14	0.06	401	15	-0.03
5	Anderson WR & BL	Kongwak	3951	540597R	1,249	270	91	109	90	14	0.06	404	16	-0.02
6	Kitchen Farms	Boyanup	6237	W00248F	1,902	427	57	104	83	12	0.06	335	17	0.03
7	Perrett RJ & HE	Kongwak	3951	540624E	661	271	7	103	85	17	-0.02	674	14	-0.22
8	Wagner G	Winnaleah	7265	T63SWAA	3,192	187	12	102	80	12	0.03	402	18	0.01
9	Walder RG & CA	Heathmere	3305	840404W	836	161	0	98	73	10	0.08	226	14	0.06
10	Hoey, DM & L	Katunga	3640	4I0025F	70	49	15	95	78	11	0.08	254	14	0.04
10	Sprunt RG	Kaarimba	3635	C01125S	447	176	37	95	64	11	-0.00	428	13	-0.07
12	Uebergang IS & JA	Gorae West	3305	840391T	284	56	0	94	70	12	0.05	354	9	-0.08
13	Johnston RSN & LJ	Bundalaguah	3851	240024G	2,079	710	0	93	77	13	0.01	483	16	-0.07
13	Willcocks P & I	Yankalilla	5203	S00047P	885	189	42	93	60	11	-0.02	440	14	-0.07
15	Cook, RJ & JP	Wangaratta	3678	C00276F	1,899	540	13	89	77	12	0.05	364	14	-0.03
16	Green RJ LM & AE	Tamworth	2340	N00416Q	681	119	23	87	68	12	0.02	423	10	-0.11
17	Macqueen AD & GL	Yanakie	3960	540139F	1,253	227	124	86	69	10	0.08	226	9	-0.00
18	Lambalk, J & J	Timboon	3268	650274B	1,289	447	0	84	64	10	0.06	250	10	-0.02
19	Lia TO & PM Pty Ltd	Nilma North	3821	540184S	663	191	0	83	75	12	0.01	441	17	-0.03
19	Coster, B & M	Ripplebrook	3818	981306Q	1,919	864	272	83	68	10	0.06	252	12	0.02
21	Moscript ME CJ & JM	Leongatha Sth	3953	540300E	836	189	0	82	52	11	-0.02	457	8	-0.16
22	Heywood BO & LD	Yarragon	3823	240851B	1,059	251	0	81	63	9	0.08	183	10	0.03
23	McRae SA & NM	Nambrok	3847	2K0054J	471	353	80	80	62	9	0.05	234	11	0.02
24	Kennedy R & M	Cobains	3850	240025J	1,455	229	0	79	62	11	0.01	387	12	-0.06
25	Fielding R & D	South Riana	7316	T34GFJM	1,566	377	0	78	57	8	0.07	154	11	0.06
26	Bradley, DB & LD	Denison	3858	240294T	1,285	288	0	76	47	1	0.16	-264	11	0.32
26	Derix, GM & ME	Maffra	3860	270031H	756	129	58	76	41	4	0.08	8	9	0.12
28	Woodbine Holdings Pty	Lancaster	3620	B20571E	2,456	753	0	75	62	11	0.03	343	8	-0.09
28	Walker AH & AR	Yinnar South	3869	981403K	484	87	0	75	59	8	0.04	227	14	0.06
28	Coates, JD	Allestree	3305	840377M	1,068	231	0	75	58	10	0.02	319	11	-0.04
28	Mills SL & JM	Lockington	3563	C00996F	655	163	20	75	57	11	-0.00	412	9	-0.12
32	Flemming, GM & PE	Tocumwal	2714	4A1373N	1,281	282	114	74	62	9	0.04	268	12	0.01
32	Glasgow, DC & EJ	Bena	3946	540564F	589	144	0	74	55	11	0.00	398	8	-0.12
34	White, KL & DM & RL	Leongatha Sth	3953	540605F	1,283	393	177	72	60	9	0.04	263	12	0.01
34	Oanway JE Farms	Longwarry	3816	5C0049C	1,641	800	412	72	58	8	0.07	141	11	0.07
34	Pekin, JF & A & JG	Terang	3264	850550V	1,145	323	0	72	54	8	0.05	210	9	0.01
37	Little, JR & SL/Martin D	Korumburra	3950	540600N	981	124	0	71	59	8	0.06	180	11	0.05
37	Lister, Craig A	Calivil	3573	4A3216P	1,070	285	132	71	52	10	-0.00	370	9	-0.10
37	Holt Family Trust	Bundalaguah	3851	240111W	986	78	0	71	49	6	0.08	70	9	0.09
37	McRae SA & NM	Nambrook	3847	2B0043B	458	34	19	71	49	9	0.00	330	8	-0.08
37	Gale, DP & JF	Timboon	3268	650188L	2,789	555	0	71	49	8	0.06	165	7	-0.00
37	Nolte, MB & R	Merino	3310	840223P	644	83	0	71	48	7	0.05	170	8	0.01

2013 Australian Breeding Values – Top Herd Summary

APR rank	Owner name	Address	Post code	National Herd ID	Cows on file	Current cows	No. of (g) cows	APR	ASI	Prot. ABV	Prot % ABV	Milk ABV	Fat ABV	Fat % ABV
Top Jersey herds based on herd average APR, August 2013 ABVs														
1	Hoey DM & L	Katunga	3640	240699A	1,011	232	135	107	92	10	0.20	7	17	0.32
2	Glennen & Co C	Terang	3264	850588C	2,561	457	45	104	82	6	0.24	-146	18	0.49
3	Worboys R & A	Kotta	3565	C00993T	1,105	258	0	83	60	5	0.16	-71	12	0.30
4	Wyss Trading P/L	Boorcan	3265	850604I	1,206	114	0	74	54	3	0.16	-131	16	0.44
5	Moscript ME CJ & JM	Leongatha Sth	3953	540300E	975	106	18	71	47	3	0.12	-61	12	0.29
6	McManus, BT & CA	Bamawm	3561	C00935T	705	147	0	68	50	5	0.14	-62	8	0.22
7	Codling & Baker	Larpent	3249	740064P	639	139	0	58	49	1	0.24	-288	10	0.49
8	Briggs RG & EH	Nanneella	3561	C00998L	43	40	0	56	51	5	0.16	-71	7	0.21
8	Tanner, JS & KL	East Framlingham	3265	841827A	267	34	0	56	31	3	0.09	-19	4	0.09
10	Van Den Bosch JH & CA	Lockington	3563	C00927B	359	46	0	54	43	1	0.22	-260	8	0.42
10	Dupliex DM & WH	Cobram	3644	C00430M	326	36	0	54	35	2	0.13	-119	8	0.27
10	Smethurst, B & D	Timboon	3268	650400L	627	164	75	54	35	5	0.05	82	3	-0.02
13	Sealey NJ & V	Henty	3312	840537O	809	256	0	53	41	3	0.16	-140	7	0.28
14	Bacon, RLG & SL	Tennyson	3572	C00859H	1,697	305	82	52	28	3	0.05	29	5	0.06
15	Brady P	Yinnar	3869	240339I	1,812	291	113	50	33	1	0.14	-151	7	0.29
15	Bacon, C & N	Lockington	3563	C01682H	543	203	0	50	33	4	0.08	-6	4	0.09
17	Jarvis A & L	Kergunyah	3691	C00234S	350	55	0	48	29	2	0.11	-107	6	0.22
18	Stewart, M & D	Bairnsdale	3875	240198F	1,072	202	0	47	32	1	0.12	-122	8	0.27
18	Balnageith Jersey Stud	Warragul	3820	260037W	1,062	320	0	47	24	3	0.06	7	3	0.04
20	Hill, AJ, CA, SG & BF	Kolora	3265	850478V	613	198	0	46	32	2	0.11	-81	6	0.20
Top Red Breeds herds based on herd average APR, August 2013 ABVs														
Ayrshire														
1	Johnstone B & R	Hawksdale	3287	SM0023T	67	67	0	7	14	-1	0.07	-160	3	0.15
2	Howlett VW & JS	Drumborg	3304	840369R	432	55	0	-126	-114	-16	-0.09	-413	-25	-0.10
3	Carson JH & GL	Irrewillipe	3249	740170H	181	87	0	-133	-94	-11	-0.11	-180	-23	-0.22
4	Hyland MI & JR	Pinelodge	3631	C00642C	1,040	142	0	-134	-105	-14	-0.12	-296	-20	-0.11
Illawarra														
1	Blue Range Pastoral Co	Allora	4362	Q01283M	197	33	0	1	9	3	-0.03	172	2	-0.07
2	Carson JH & GL	Irrewillipe	3249	740170H	56	35	0	-23	-21	1	-0.09	192	-6	-0.21
3	Chelmonte Farming	Brymaroo	4403	Q00203D	1,310	236	0	-46	-47	-10	0.00	-371	-6	0.14
4	Williams GP & RC	Meningie	5264	4A1868T	1,194	350	0	-49	-40	-5	-0.03	-119	-11	-0.08
Aussie Red														
1	Raleigh, Jan	Timboon	3268	650244V	652	200	0	85	40	5	0.06	69	7	0.06
2	Graham RW & BC	Numbaa	2540	N00555U	1,290	511	0	80	38	5	0.04	86	8	0.07
3	Waltham GV & JL	Glengarry	3854	240345U	557	188	0	77	38	5	0.07	26	5	0.06
4	Goulding JA, WA, NC & S	Cohuna	3568	4A2144I	530	110	0	72	32	4	0.05	30	6	0.07
Top Brown Swiss herds based on herd average APR, August 2013 ABVs														
Brown Swiss														
1	Restdown Pastoral	Rochester	3561	C00871I	1,645	549	0	-12	-4	-1	0.01	-27	-1	-0.00
2	Fiechtner KJ & JC	Ellangowan	4361	EGCT00L	263	88	0	-13	-13	-1	-0.04	-4	-2	-0.05
3	Brown E & Fisicaro S	Strathmerton	3641	4K0080C	86	67	0	-14	-4	-0	0.01	-19	-2	-0.02
4	Balfour PE & SM	Girgarre	3624	B21285J	434	187	0	-17	-7	-1	0.01	-36	-3	-0.02