Australian Dairy Herd Improvement Report 2014

Australian Dairy Herd Improvement Scheme

NATIONAL HERD IMPROVEMENT ASSOCIATION OF AUSTRALIA INC. NHIA

ADHIS is an Australian Dairy Farmers Ltd initiative that receives the majority of its funding from Dairy Australia through the Dairy Services Levy.

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Contents

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.

This past year has seen a number of very important developments within the herd improvement industry.

Dairy Australia has implemented a wide ranging review of the roles and activities of the sector and set up the Herd Improvement Industry Strategic Steering Group (HIISSG). NHIA is pleased to be a member of the HIISSG and to play a part in bringing forward the Herd Improvement Strategy 2020.

Of specific interest to NHIA members and the dairy farmers they serve is the Herd Test Taskforce set up as part of the HIISSG process. Herd testing and the measurement of individual cow performance is the foundation of all genetic improvement. Without identifying individual animals and measuring their performance there can be no genetic evaluation system, no way of accurately identifying superior bulls or cows for use in breeding programs and no way of enhancing productivity through genetic gain.

The HIISSG strategy recognises the fundamental importance of Australia's herd test sector and we look forward to an alignment of effort across the board that will bring improvements to the benefit of dairy farmers everywhere.

The ranking of individual bulls to ascertain which ones are superior is another fundamental tenet of successful cattle breeding. Another highlight of this past year is the immense effort that ADHIS has applied to getting both farmers and industry to work together to lead to a consensus on the National Breeding Objective. On behalf of NHIA and its members, I should like to congratulate ADHIS on the collaborative process that they have undertaken in setting the NBO and I look forward to seeing the benefits of this in the coming year.

The issue of dairy data and how it is organised in Australia has been part of an ongoing process for the past few years and I am pleased to see real progress being made in this regard. There has been substantial rationalisation recently and there are now two software platforms being utilised by herd test centres, instead of the five of the past. By early 2015, we expect the vast majority of herd test data to have been amalgamated onto one database. This should see us begin to realise the immense industry benefits that we know that we should be realising from working together collaboratively instead of in separate 'silos'.

Talking of collaboration, I would like to take this opportunity to acknowledge and thank our industry partners, Dairy Australia and ADHIS, as well as all breed societies and our members in NHIA for the congenial spirit that has marked our interactions in the past year. Each is a vital cog in providing dairy farmers with the tools to run profitable dairy operations and it is pleasing to see the benefits of working together for the common good.

ADHIS Chairman's report

By Adrian Drury
ADHIS Chairman

It has been three years since I took the position as chair of ADHIS and 2014 has proved an exciting and dynamic year to be involved in herd improvement. For ADHIS the past 12 months has been a hive of activity with several milestone projects underway. I would like to start by thanking all of our stakeholders and partners including Dairy Australia, Department of Environment and Primary Industries (Victoria), the Dairy Futures CRC, herd test centres, bull companies and breed societies for their ongoing collaboration and tremendous support. A special thank you also to all the farmers who took the time to contribute to the National Breeding Objective Review at its various stages– your contributions have been invaluable in setting the future direction of cow breeding in Australia.

As you will see in this report, the dairying environment in which we are operating is constantly evolving and so it is more important than ever that we remain flexible and relevant to the industry. Over the past 12 month ADHIS has embarked on the National Breeding Objective (NBO) Review, our most ambitious communications and engagement task yet, with farmers, herd improvement stakeholders and the broader industry. In January, ADHIS established the NBO taskforce to review outputs during the review process, to provide direction and to ensure wider input from farmers and industry was maintained throughout the review. Following their inaugural meeting during International Dairy Week in January the taskforce has met eight times and provided invaluable direction and debate on the review of our national breeding objective.

In March we kicked off the NBO review with Australia's Longest Farm Walk, talking to more than 600 farmers and industry professionals on 46 farms across 26 locations in every dairying region of Australia. These events were a great success and provided the opportunity for direct interaction with farmers regarding breeding and genetics. The NBO review has been a truly collaborative process and my thanks goes to all those who have contributed in some way.

It is now more obvious than ever that data is king when it comes to providing world class analysis for genetic improvement. In order to meet Australia's future genetic evaluation needs ADHIS has this year, with assistance from Dairy Australia, commenced a large scale overhaul of our computer system. The new system, known as GESII, will deliver a greater level of automation, flexibility and quality control to support the evolving requirements of genetic evaluation and genomic testing.

In November Mr Ian Cobbledick and Mr James Neal were appointed to the ADHIS board. Mr Cobbledick and Mr Neal replace outgoing directors Mr Stuart Tweddle and Prof Jock Macmillan. Mr Cobbledick is a sixth generation farmer from Nathalia, Victoria, who has been a committed industry leader and played an active role in many Dairy Australia and UDV initiatives including six years as chairman of Murray Dairy. Mr Neal is a dairy farmer from Oxley Island near Taree, NSW. He has completed a Bachelor of Agricultural Science and a PhD while working as a research scientist for the NSW DPI before taking over the family farm. I would like to thank Stuart and Jock for their significant contributions to ADHIS over their six and three years, respectively, and I look forward to working with the new board in the coming year.

Looking to the future, I am excited to be heading into 2015 with three new indices for dairy farmers. This outcome of the NBO Review is a tangible benefit to the industry and something we should all be proud of. Farmers now have more choice when it comes to selecting bulls for their herd and can have the confidence that the indices will drive progress in the direction farmers want.

Finally, I would like to thank all of the staff of ADHIS for their enthusiasm and commitment to delivering ADHIS initiatives over the past year. The significant achievements that we have made would not have been possible without the team's dedication to driving genetic improvement for all Australian dairy farmers.

NHIA activities

By Carol Millar NHIA General Manager

Herd test plays vital role in Herd Improvement Strategy 2020

Herd testing statistics in Australia have reflected an ongoing decline – both in numbers of herds participating as well as numbers of cows – for more than a decade. The decline in numbers of herds can, to some extent, be explained by the overall decline in the numbers of dairy farmers as there are almost half the numbers of dairy farmers today than there were a decade ago.

It is more difficult, however, to explain the decline in numbers of cows in herd testing. In Victoria, for example, the number of herd tested cows declined from 761,219 in 2001 to 409,743 in 2014.[1]

Overall, however, cow numbers in the national herd declined from 2,176,000 in 2001 to 1,650,000 in 2013.[2] This is a significantly less dramatic decline than the numbers of herd tested cows.

This is a sector with very limited capacity for innovation and many service providers are offering the same products and services to the majority of their customers as they were 20 years ago but the drivers for farmers to herd test are not necessarily the same as 20 years ago. This is due to very tight financial situations as well as human resource and technical issues. As an example, at the taskforce meeting – where five of the biggest service providers were represented – not one person in those organisations had travelled overseas in the past five years to observe latest industry trends or attended any meetings of the International Committee on Animal Recording (ICAR).

Herd test service providers need to overcome their current isolation and improve their connectedness to global developments. They need to re-assess the flexibility of their service delivery and consider the demands of niche processors/markets. While cell counts remain an important focus for both service

providers and farmers, there are other areas that may need consideration in the near future such as measuring fatty acid profiles in cows, or methane emissions or other milk components not currently measured.

Australian farmers operate in an extremely tight labour market and the extra work needed for herd testing is frequently cited as a barrier to participation. This is an area where technology might be employed to make test day easier, and where more flexible delivery options such as single sample testing or using existing shed equipment to measure volumes would be appropriate. In addition, there continues to be a need to communicate the value proposition of herd testing clearly and simply to farmers.

Herd testing and its importance to farmers for management decision making as well as genetic evaluation is not well understood by elements of the wider dairy industry. The sector lacks effective advocates from the ranks of veterinarians, consultants or even, factory field officers. There is an element of bridge building that may need to occur so that service providers can work with these groups of people to help them better serve the needs of their clients.

The question of data is central to the herd test sector. This issue will be discussed elsewhere and is not the focus of this report, however, it is important that the point is strongly made that Australia needs a centralised data system as soon as possible. It is vital that the quality and quantity of herd test and dairy data is improved for the benefit of all stakeholders. Without such a system, Australia will struggle to maintain its position as a globally competitive dairy industry.

In addition to its contribution to genetic evaluation, herd testing is of vital importance to dairy farmers who use the information from it to base their management decisions. It would be of significant value to both service providers and farmers if herd test reports were made easier to read, more visually appealing and develop new and exciting reports for farmers. For example, there is potential for greater fertility trait reporting, health trait measurements or benchmarking with farmers who supply milk to the same milk buyer and therefore subject to the same payment systems.

Key strategic goals for Herd Test Taskforce

1. Increase the participation of farms/cows on herd test to 55% of the national herd by 2020. Currently this participation level sits at approximately 43%.
2. Communicate in a more effective way, the value proposition for herd test to farmers as well as other industry participants such as veterinarians, consultants, milk buyers and other industry bodies.
3. Develop staff training opportunities for service providers within the herd test sector.
4. Develop more flexibility around service delivery of herd test to farmers.
5. Investigate further opportunities within the herd test sector for co-operation and rationalisation particularly with regards to marketing, laboratories, transport and logistics.
6. Promote a herd test sector that is more connected with other parts of the Australian dairy industry and more 'plugged in' to international trends and developments.

References

1. Australian Dairy Herd Improvement report 2014
2. Dairy Australia website

ADHIS activity report

By Daniel Abernethy, ADHIS General Manager

2014 has been a very exciting and action packed year for ADHIS as we embarked on a comprehensive review of Australia's National Breeding Objective and our index. The National Breeding Objective (NBO) aims to deliver herds that the Australian dairy industry needs for the future. This review has been the largest scale review to date and with a focus on farmers having a direct say in the future direction of cow breeding in Australia. Australia's Longest Farm Walk, held in March, along with a farmer preferences survey, the NBO taskforce, and several rounds of industry consultation has seen many hundreds of farmers contribute over the last 12 month. Currently, Australia's national breeding objective is profit and feedback from the review confirmed that driving on-farm profit is still the prime focus for Australia's dairy farmers.

With the NBO review now complete, ADHIS is poised to release three new breeding indices in line with this overriding objective and shaped by farmer preferences. The APR (Australian Profit Ranking) will be replaced by a Balanced Performance Index (BPI) which achieves farm profit through a balance of longevity, health, type and efficient production. A key outcome of the NBO review was the recognition that Australian farmers have a variety of breeding priorities. To better cater for these differences two specialised indices are being introduced; the TWI (Type Weighted Index) and HWI (Health Weighted Index); these will allow farmers to 'fast track' improvement in type traits and health traits respectively.

The April 2015 release will also see the introduction of several updates resulting from research undertaken over the last two years namely a new test day model for evaluating production traits, the introduction of two new traits; Feed Efficiency and Residual Survival, and the introduction of new expression for type traits.

This report provides an overview of this year's key initiatives followed by a full list of developments in Figure 1 (page 8).

HIISSG

Under the leadership of Dairy Australia, ADHIS was pleased to join other herd improvement stakeholders to form the Herd Improvement Industry Strategic Steering Group (HIISSG) and to contribute to the development of Herd Improvement Strategy 2020. This 'whole of industry' strategy will play a key role in supporting a vibrant herd improvement industry which can deliver real value to farmers. A key component of this initiative is to consult widely with farmers and herd improvement service providers to gain input, support and direction on key areas including genetic evaluation and research, herd testing, marketing and extension, breed societies and genomic technology implementation. We look forward to being part of this process and reporting on successful initiatives in next year's report.

Herd15

In March 2015 ADHIS, in conjunction with our industry partners NHIA, Holstein Australia and Dairy Australia, will be hosting the biennial Herd15' conference. The theme of Herd15' is 'Stronger Together, Collaboration in Herd Improvement' and with a program packed with renowned international and local speakers on topics as broad ranging as collaboration on genomics and the value of herd recording we are confident this is our best program yet! We invite you to participate in this event, which attracts keen interest from industry, farmers, scientists, extension and education professionals and government through an engaging program focused on herd improvement.

Test Day Model

Recent research conducted by ADHIS and DEPI-V has shown that a technique for the calculation of production ABVs, known as a Test Day Model, can improve the reliability of ABVs for Production traits and will be implemented from April 2015. This follows the first introduction of a test-day model for cell count in 2008. The new Test Day model replaces the current aggregated 305 day lactation model and will result in increased reliability of production ABVs. This has successfully passed the Interbull test run for all breeds, including Brown Swiss.

Feed Efficiency ABV

A new Feed Efficiency ABV will be introduced from April 2015 for Holsteins based on research conducted with the Dairy Futures CRC, DEPI-V and their global partners and supported by the Gardiner Foundation to determine the validity of a feed efficiency breeding value utilising residual feed intake. Given the same level of performance, some cows use feed more efficiently than others. Selecting animals with higher feed efficiency has a positive contribution towards profit and is included in all three of the new breeding indices.

Residual Survival ABV

A new trait, Residual Survival, will be available from 2015 and will replace survival in all three of the new breeding indices. Residual Survival includes all the reasons why cows last in the herd that aren't related to production, fertility, cell count or other traits that have their own economic values in the indices. Farmers will now be able to more accurately select bulls to improve survival in their herd.

Software upgrade – GESII

Last year, ADHIS commissioned the development of new software to replace the current ADHIS Genetic Evaluation System (GES). This large scale project, known as GESII, is now underway with a number of key milestones met. GESII will provide a quantum leap forward for ADHIS by allowing increased services and more frequent evaluation runs, increased automation and quality control, improvements in data transference between ADHIS and data providers and greater capacity to introduce new traits. Supported by Dairy Australia, this major upgrade will continue through 2015 with completion due in 2016.

Genomics

Genomic technology continues to progress with several key developments. ADHIS participated in GMACE (a new Interbull genomic evaluation service for overseas bulls with no genotype in Australia) to deliver genomic breeding values for 1000's of bulls which would otherwise have no comparable Australian breeding value. August 2014 marked the first release of these breeding values which will be known as ABV(ig)s.

A low-cost genomic screening initiative was undertaken by ADHIS in late 2013 to encourage bull companies to scan a much larger quantity of bulls for their suitability to Australian conditions. More than 1000 additional bulls were screened as part of this initiative to increase selection pressure for sires suited to Australian conditions.

Genetic Progress Report

The popular Genetic Progress Report is fast becoming an essential tool for farmers to help them monitor the success of breeding choices and benchmark against the national average. The Report uses cow ABVs produced from data collected through herd recording to let farmers track genetic progress 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. Genetic Progress Reports can be requested from herd-test centres and Holstein Australia and this year were mailed out to farmers following the April release of ABVs.

RD&E activity summary

ADHIS continues to invest in a range of research, development, extension, education and communication activities. Figure 1 highlights the impact of several 2014 developments.

Figure 1: A range of ADHIS activities in 2014.		
Development	Activity	Impact
National Breeding Objective Review	An industry-wide initiative led by ADHIS and involving hundreds of farmers and service providers with strong support from industry, commercial and government organisations to review the National Breeding Objective (for profit) and the index/indices used to achieve it.	Three new indices aligned to farmer preferences means farmers now have more choice when selecting bulls for their herd.
Australia's Longest Farm Walk	A series of 26 events on 46 farms in every dairy region to engage with farmers about the sort of cows we want to be milking in the future. In total, the process involved around 600 participants.	Farmers can have confidence that the feedback collected from farmers has had a direct input into the NBO review & resulting indices.
Good Bulls Guide	Published and distributed in April and August 2014. 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.
Feeding the Genes	Parts two and three of the Feeding the Genes research were completed to further explore the relationship between feeding systems and genetics.	Farmers and advisers are better equipped to make more informed decisions about the value of higher genetic merit cows in their own feeding system.
The Dairy Moving Forward Fertility Steering Group	Participated in a strategic advisory group that has prioritised areas of investment for improving Australia's herd fertility	A clear identification of the importance of the daughter fertility ABV and semen fertility as priorities for improving herd reproductive performance.
DEPI Breeding for Performance project	Facilitated genetics discussions among 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 data project	The Dairy Futures CRC and ADHIS Fertility Data Project has achieved its target of one million more fertility records.	Farmers can more effectively improve this trait through breeding because more bulls have Fertility ABVs with higher reliabilities.
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.
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	Increasing the reliability of genomic breeding values which means farmers can select young bulls and imported bulls with no Australian daughters with more confidence.
Type expression	ADHIS has investigated best practice for the expression of type traits internationally. Standardisation of type traits will be introduced from April 2015.	Standardising type traits will make it easier for farmers to assess how good an animal is for that trait.
GINFO	ADHIS is collaborating with the DFCRC on GINFO, a two year research project working with 100 dairy herds to inject data into the national genomic reference set.	This data will help inform future genomic tests and improve the reliability and accuracy of genomic testing.
ABV(ig)s	ADHIS has collaborated with Interbull on new Interbull genomic breeding values for overseas bulls with no genotype recorded in Australia (also known as GMACE). August 2014 marked the first release of these breeding values which will be known as ABV(ig)s.	1000s of additional bulls can be reviewed for their suitability to Australian herds that would otherwise have no comparable Australian breeding value.
Jersey Ancestry Project	A collaborative effort between the Dairy Futures CRC, ADHIS, Jersey Australia, farmers and AI organisation – has accumulated genotypes on almost 1000 bulls.	A reliability boost of 1-8% for Jersey ABVs (depending on the trait) means farmers can have more confidence when selecting bulls using ABV(g)s.
Bull genotyping	1000s of additional bull genotypes have been loaded following a low cost screening program sponsored by ADHIS	A broader group of bulls genotyped means more bulls selected which suit Australian conditions giving farmers better choice.

In June 2014 ADHIS announced the appointment of Timothy Hancock to a newly created statistician role at ADHIS. In this role, Tim will support ADHIS Geneticist and team leader Gert Nieuwhof and the technical team to assist in the ongoing R&D activities surrounding genomics, genomic testing services and new traits. Tim is familiar in working within R&D groups having led international research teams and supervised masters and PhD candidates. Tim's mix of skills and expertise will complement the ADHIS team well.

ADHIS Board and Committees

ADHIS Board of Management

The Board met seven 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), Lyndon Cleggett, Daryl Hoey, John Harlock, Matthew Shaffer, Stuart Tweddle (retired Nov 2014), Jock Macmillan(retired Nov 2014), James Neal (appointed Nov 2014), Ian Cobbledick (appointed Nov 2014), 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

Timothy Hancock, Statistician

Judith Schweitzer, Information Scientist

Paul Koh, Data and Services Manager

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 2014 ADHIS hosted a number of industry technical meetings, participated in the HIISSG overall strategy including the genomic pipeline working group, and helped establish a new type taskforce. 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.

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).

National Breeding Objective Taskforce

The National Breeding Objective (NBO) taskforce was established in January 2014 to monitor outputs of the review process, to provide direction and to ensure wider input from farmers and industry was maintained throughout the review. The taskforce met eight times throughout 2014 at key stages of the review.

Members

Joanne Dickson(Dairy Farmer), Graeme Gillan (NHIA, Holstein Australia), Patrick Glass (Dairy Farmer, breed society representative), Daryl Hoey (Dairy Farmer, Australian Dairyfarmers), Mike Huth (NHIA, CRV Australia), Ray Kitchen (Dairy Farmer), James Neal (Dairy Farmer), Matthew Radford (Dairy Farmer), Matthew Shaffer (Dairy Australia), Peter Thurn (NHIA, Genetics Australia).

Is InCalf still relevant for my herd?

Dr Richard Shepherd
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Dr Barry Zimmermann has recently retired as InCalf Project Leader after seven productive years. Dr Richard Shephard has taken over Barry's role and InCalf Project Consultant Dr Andrew Perry ably supports him. Dairy Australia would like to thank Barry for his efforts – especially establishing, updating and delivery of information and training on reproduction to and for Australian dairy farmers.

Change provides an opportunity to review and revisit the objectives and purpose of the InCalf initiative. Infertility was recognised as a significant cost to the dairy industry in the early 1990s but the drivers of the decline in herd fertility and the gaps in knowledge were poorly understood. This was the primary reason for the establishment of the InCalf project.

The early InCalf work defined the key drivers of reproduction: calf and heifer management, body condition and nutrition, heat detection, AI and sire selection, bull management, and cow health. This work culminated in 2003 in the world-recognised InCalf Book for Dairy Farmers and supporting extension material. A major project for 2015 will be to update the InCalf Book (and ancillary material) to reflect current herd performance and objectives.

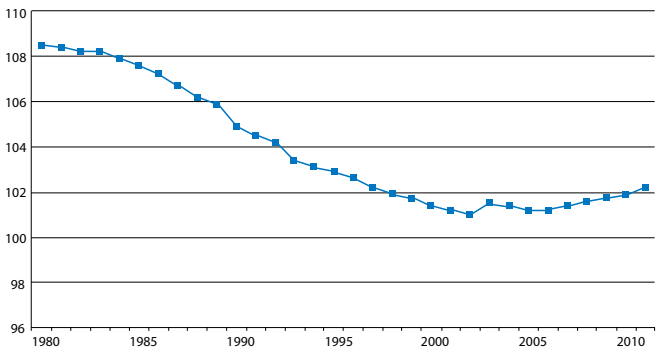
For many farms, the 2003-based performance targets that are presented in the InCalf Book appear daunting if applied against their current herd performance measures. Identifying areas for change, prioritising actions and deciding where and how to start can be overwhelming for many farmers. InCalf is therefore focusing on the development of specialist skills among a range of herd reproduction advisers through the implementation in 2014 of ReproRight – a new advanced year-long training course in reproduction investigation and management. ReproRight covers all aspects of dairy reproduction, including developing diagnostic skills and ensuring practical application to solve real farm problems. The first group of 13 advisers graduated in 2014 and they are already increasing their reproductive work with farmers. We encourage you to contact a local Repro Right-trained adviser – a list is available on the Dairy Australia website – to help you with your herd. A local ReproRight trained adviser will be a resource for your farm.

In addition, InCalf is also making it easier for farmers to take charge of their herd's reproductive performance with a series of hour-long webinars providing training, information and access to experts on oestrus synchrony and heat detection. Participants could attend by computer or smart phone, set-up was easy and these were well received by farmers. Webinars help overcome the tyranny of distance, allow efficient use of farmer's time and can bring expert speakers to all places. We have designed them to be interactive (questions are encouraged) and Dairy Australia will be using this medium more and more in the future.

While many factors have contributed to the decline in reproductive performance on individual farms there is clear evidence for the role of genetics in reversing the trend. A persistent and consistent focus on only using AI bulls with daughter fertility ABV's greater than 100 will improve herd fertility across the industry. Start today in your herd.

For more information contact Richard Shephard, InCalf Project Leader, 03 5147 0307, or Kathryn Davis, Dairy Australia Program Manager, Animal Health & Fertility, kdavis@dairyaustralia.com.au.

Figure 2: Average daughter fertility ABV of Holstein cows by year of birth.



Update on Countdown 2020

Dairy Australia
Countdown Downunder
Your Levy at Work

National BMCC Results - 2013

Maintaining milk quality remains a focus of every dairy business. A dairy farmer once told me, "as soon as you think you are on top of your mastitis, you are not" signifying the importance of keeping a close eye on the spread of mastitis, in amongst all the other work!

The most recent analysis of national Bulk Milk Cell Count (BMCC) data for the 2013 calendar year found ongoing improvement in the proportion of farms with an annual average BMCC of less than 250,000 cells/mL (67.0% compared with 64.4% in 2012).

Although it is encouraging to see these improvements, the farms with an annual average cell count above 400,000 remain a concern, especially in light of the rising demand for higher quality milk. Many processors are also tightening penalties for supplying milk with high BMCC or microbial downgrades and discarding milk with high BMCC.

Quality Data is Key

Obtaining the maximum value with herd test data is a challenge that we need to address. In my role as a milk quality adviser, a key component of any herd investigation or ongoing monitoring is providing data in a form that is easily interpreted by the dairy farmer.

The Mastitis Focus Report (MFR) developed by the Countdown project brings together individual cell count data and clinical mastitis information. The value of the MFR report is enhanced if clinical mastitis information from the herd is regularly entered into the farm's dairy software program. Farmers and veterinarians need further encouragement to increase the use of this very well designed tool for investigating problems but mainly monitoring the spread of mastitis.

Often when looking at milk quality data on a particular farm the warning signs of a serious deterioration in milk quality can be seen well before the farmer requests help. This begs the question, how can we supply critical information to farmers in a timely manner? This applies mainly to individual cow cell count data (ICCC) but there is also scope for better analysis and delivery of BMCC data routinely collected by milk processors.

One of the advantages of regular herd testing is that over time, the accumulation of data builds into a more accurate representation of the herd's performance. Even in herds with excellent data, well presented information obtained from herd testing can help farmers to make better decisions. We all need to continue to build a strong case for regular herd testing to capture these significant benefits.

National Breeding Objectives

It is encouraging to see mastitis resistance identified as one of the key priority traits in the recent NBO review by ADHIS. The emphasis on this genetic trait in all three of the new breeding indices will complement well the Countdown work on the management and environmental factors that influence mastitis risk.

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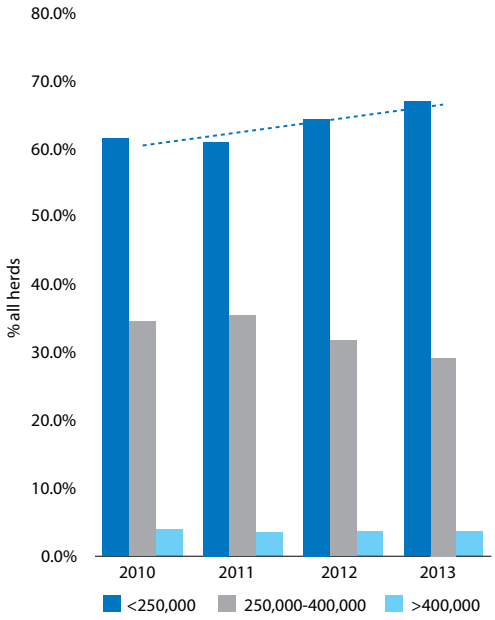
FIgure 3: Change in annual average BMCC (2010–2013).



Dairy Futures CRC Report

Dr David Nation, CEO, Dairy Futures CRC

Real farm data driving improved fertility

This year, Dairy Futures CRC began a research effort that will play an important role in improving Australia's genetic evaluation system.

Ginfo (Genomic Information herds) is a two-year research project that involves the CRC actively working with 100 dairy herds (about 30,000 cows) to inject herd records and genotypes into the national genomic reference set. The participating herds are providing high-quality records that are crucial for making sure ABVs best represent performance under Australian conditions.

The 30,000 cows being tested will become 'reference animals': their performance data and their DNA sequence will help inform future genomic tests. The breadth of knowledge from these cows will also provide a number of other benefits, enabling scientists to test new methods that improve the prediction of a cow's genetic merit, and technology developers to produce more relevant cow tests.

The *Ginfo* project is working to improve the reliability of all genomic analysis, but has a specific focus on fertility (by keeping more detailed records of all cows in *Ginfo* herds) and type (through conformation assessments of *Ginfo*-nominated cows during their first lactation). Additionally, the herds participating in the *Ginfo* project provide a platform for the *Health Data for Healthy Cows* project, recently funded by the Gardiner Foundation, which focuses on cow health by collecting more detailed health records to assess the role of genetics and genomic predictions in preventing major illnesses.

The *Ginfo* project has progressed well, and this is largely due to the energetic cooperation of the participating farmers from across Australia. All nominated 100 herds have been visited, with the initial requirement of tail hair sampling completed, as scheduled, and it is pleasing that sampling has caused little to no delays in normal milking routines. We have received around 30,000 tail hair samples, and have more than 20,000 in tubes in preparation for DNA extraction and genotyping. I would also like to acknowledge the active support of Holstein Australia, the Department of Environment and Primary Industries Victoria, the ADHIS, Dairy Australia and participating veterinary clinics.

Ginfo is building a rich data resource that will provide multiple benefits for the dairy industry. Researchers are testing the DNA samples from the *Ginfo* cows to find ways to reduce the cost of future DNA tests. Our ambition is to halve the laboratory costs for DNA tests, making it affordable for all commercial cattle in Australia, and ushering in a new era of better informed decision-making based on the genetic merit of dairy cattle.

Other achievements

While launching *Ginfo* has been an important project this year, our work to create rapid improvements in the Australian dairy herd has progressed in multiple other areas. We have now sequenced the DNA of more than 1100 ancestor sires, working with 20 international partners. We are using the sequence data to improve routine use of DNA to predict genetic merit. We have also completed development of a new feed efficiency trait, ready for publication by the ADHIS in April 2015.

I encourage you to visit our website, where you can find more information and view a video tour of our research facility at AgriBio (www.dairyfuturescrc.com.au).

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 1930s, 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	1,892	292,403	117,340	409,743	216.6	6,709	4.0	270	3.3	225	324
New South Wales	418	76,335	21,374	97,709	233.8	7,614	3.9	296	3.3	248	343
Queensland	234	23,843	12,162	36,005	153.9	6,124	3.9	241	3.2	196	329
South Australia	199	38,473	7,918	46,391	233.1	7,497	3.8	283	3.3	244	336
Tasmania	164	35,556	17,369	52,925	322.7	6,170	4.0	246	3.4	208	300
Western Australia	116	25,851	4,475	30,326	261.4	7,593	3.8	286	3.1	239	339
Australia	3,023	492,461	180,638	673,099	222.7	6,890	4.0	273	3.3	228	327
Victorian regions											
Northern	733	107,308	41,254	148,562	202.7	7,230	4	287	3.3	241	333
Eastern	675	107,338	42,489	149,827	222.0	6,279	4	252	3.4	211	320
Western	484	77,757	33,597	111,354	230.1	6,585	4.1	270	3.4	222	319

Table 1a : National Totals and Production Averages 1999 to 2014.

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
2013/2014	3,023	492,461	180,638	673,099	222.7	6,890	4.0	273	3.3	228	327

National Herd Recording Statistics 2013-2014

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	1,892	33	36	59	108	175	244	327	297	199	148
New South Wales	418	3	8	10	22	30	47	65	72	55	57
Queensland	234	7	6	15	26	23	24	18	10	8	13
South Australia	199	1	2	1	12	16	28	35	29	37	30
Tasmania	164	5	2	14	17	28	29	16	12	14	9
Western Australia	116	1	0	0	4	7	9	18	25	20	22
Australia	3,023	50	54	99	189	279	381	479	445	333	279
Victorian regions											
Northern	733	6	9	14	29	42	75	112	146	112	91
Eastern	675	13	19	28	56	84	107	139	93	36	15
Western	484	14	8	17	23	49	62	76	58	51	42

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	1,892	34	46	93	174	269	353	306	202	96	53
New South Wales	418	4	11	12	33	55	60	78	53	41	22
Queensland	234	6	8	13	33	29	26	18	10	2	5
South Australia	199	0	2	5	18	27	33	30	36	30	10
Tasmania	164	3	5	22	23	34	22	11	11	4	11
Western Australia	116	1	0	0	8	10	16	32	23	12	4
Australia	3,023	48	72	145	289	424	510	475	335	185	105
Victorian regions											
Northern	733	5	14	23	49	69	131	142	114	54	35
Eastern	675	13	23	46	77	122	146	99	36	19	9
Western	484	16	9	24	48	78	76	65	52	23	9

Over the past ten years, milksolids production per herd recorded cow increased 9.4%

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	87,898	6,142	3.90	240	3.31	203	331
3 Year Old	84,524	6,760	3.95	267	3.34	226	330
Mature Cow	320,039	7,130	3.97	283	3.30	236	325
Total	492,461	6,890	3.96	273	3.31	228	327

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	87,898	245	227	209	191
3 Year Old	84,524	277	248	235	207
Mature Cow	320,039	299	263	249	218
Total	492,461	283	256	238	213

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	539	5,921	238	197
10-19	137	6,268	247	208
20-29	143	6,546	256	215
30-39	167	6,721	264	223
40-49	217	6,533	262	217
50-59	262	6,871	276	227
60-69	320	7,080	278	233
70-79	368	7,404	291	243
80-89	352	7,245	284	241
> 89	518	7,242	287	240
Total	3,023	6,890	273	228

More than 90% of herd recorded Aussie Red cows have an AI sire. This compares to 70% of Holstein and 63% of Jersey cows.

Table 7: Production averages by breed.

Breed	Number of cows	Production averages					
		Milk litres	Fat %	Fat kg	Protein %	Protein kg	Lactation length days
Holstein	317,290	7,406	3.83	283	3.24	240	333
Jersey	55,205	5,279	4.76	251	3.67	194	316
Holstein/Jersey Cross	22,786	6,274	4.32	271	3.48	218	314
Guernsey	1,273	5,586	4.33	242	3.38	189	335
Ayrshire	2,690	5,734	4.14	238	3.41	196	315
Dairy Shorthorn	365	5,175	3.88	201	3.26	169	301
Illawarra	5,496	6,390	3.93	251	3.26	208	324
Unknown Breed	69,979	6,303	3.96	249	3.33	210	318
Simmental	81	6,078	3.95	240	3.32	202	339
Red Poll	69	3,643	5.04	184	3.75	136	330
Meuse-Rhine-Issel	67	5,388	4.17	225	3.68	198	294
Aust Milking Zebu	8	6,832	3.76	257	3.15	215	375
Commercial Dairy	3	5,850	4.24	248	3.27	191	298
Aust Red Breed	13,581	6,215	4.12	256	3.42	213	314
Sahiwal	0	0	0.00	0	0.00	0	0
Brown Swiss	3,548	6,323	4.01	254	3.42	216	333
Aust Friesian Sahiwal	20	7,180	3.95	283	3.29	236	321
Total	492,461	6,890	3.96	273	3.31	228	327

The distribution of breeds remains stable compared to 2012/2013.

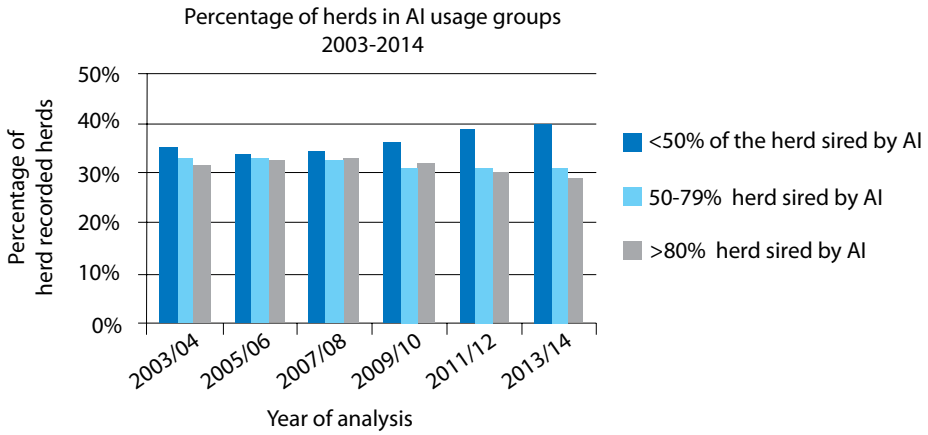


Figure 4: Herds with more than 50% replacements with a recorded AI sire has declined over the past decade.

AI and herd test costs average 2.1% of total farm costs.

(DEPI Farm Monitor Project 2013/2014)

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	16,003	3.2	7,060	3.90	275	3.26	230	343
February	28,799	5.8	7,216	3.89	281	3.30	238	343
March	52,480	10.7	7,238	3.90	282	3.32	240	341
April	51,133	10.4	7,184	3.91	281	3.32	239	338
May	45,618	9.3	7,017	3.92	275	3.31	233	329
June	37,152	7.5	6,828	3.97	271	3.33	227	323
July	49,556	10.1	6,537	4.03	263	3.36	220	317
August	83,969	17.1	6,627	4.03	267	3.35	222	311
September	66,141	13.4	6,760	3.99	270	3.29	223	322
October	32,912	6.7	6,797	3.96	269	3.24	220	327
November	16,579	3.4	6,931	3.94	273	3.23	224	340
December	12,119	2.5	7,037	3.90	274	3.22	227	343
Australia	492,461	100	6,890	3.96	273	3.31	228	327

Figure 5: Distribution of breeds.

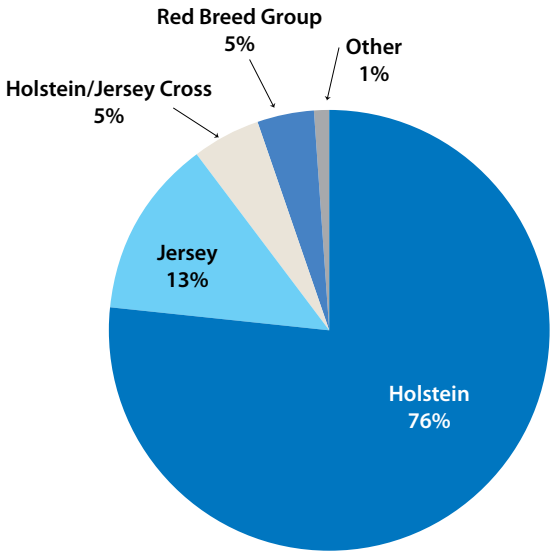
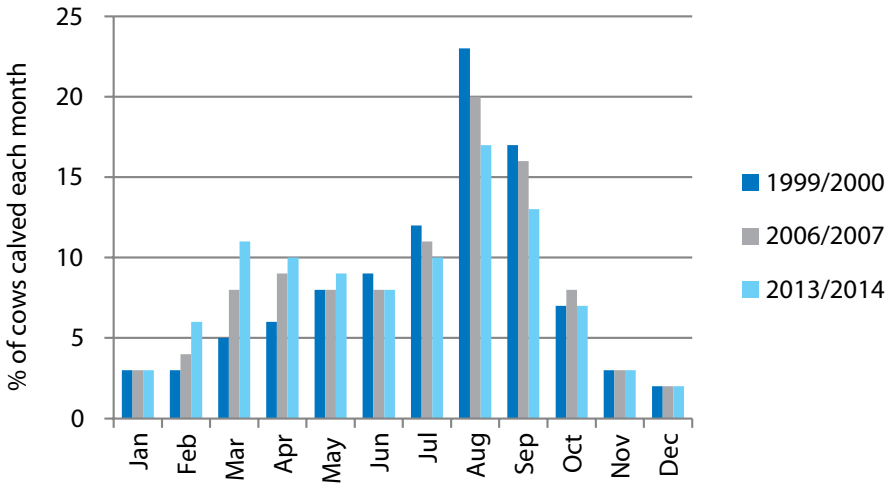


Figure 6: Distribution of calvings by month.



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 7-9.

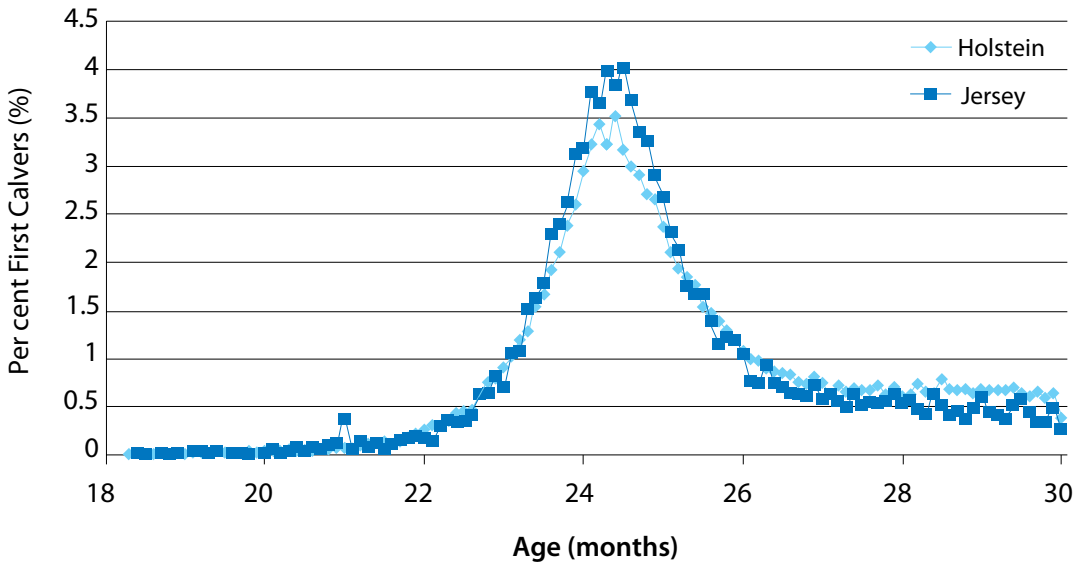


Figure 7: Age at first calving of Holstein and Jersey cows.

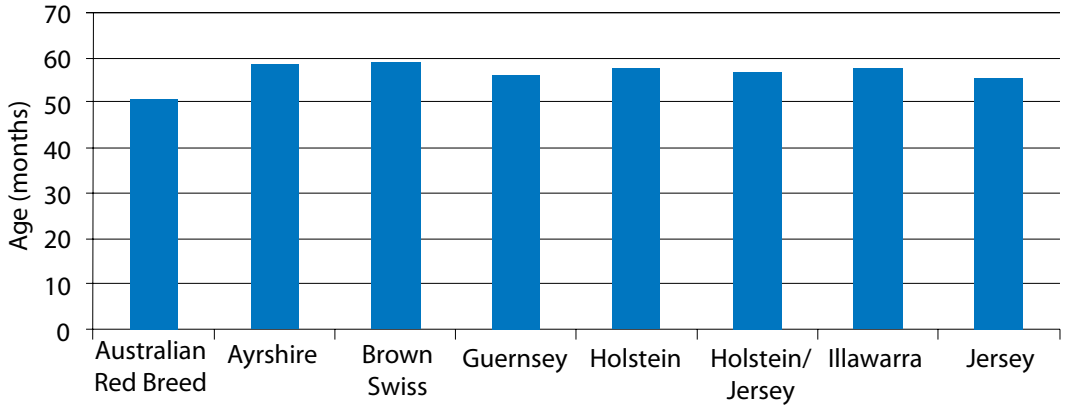


Figure 8: Average age of cows at their most recent calving.

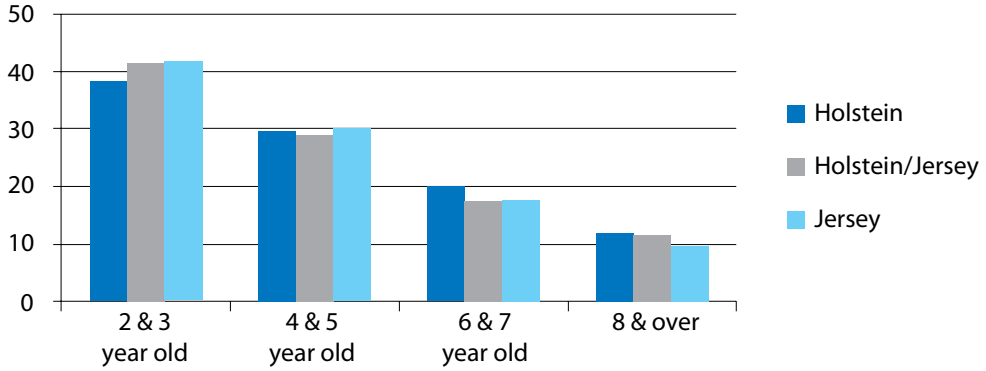


Figure 9: Age distribution of herd recorded cows by breed (at most recent calving).

29% of herd recorded herds have most of their herd sired by AI.

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	58,899	6,558	3.74	246	3.25	213	337
	3-year old	58,173	7,246	3.80	275	3.27	237	336
	Mature cow	200,218	7,702	3.85	297	3.24	249	331
	Total	317,290	7,406	3.83	283	3.24	240	333
	Artifically bred	222,458	7,621	3.81	290	3.24	247	335
	Naturally bred	94,832	6,904	3.88	268	3.25	224	328
	Pure bred	57,465	8,252	3.75	309	3.19	263	351
	Grade	259,825	7,220	3.85	278	3.26	235	329
Jersey	2-year old	11,627	4,808	4.72	227	3.62	174	319
	3-year old	10,806	5,136	4.77	245	3.69	189	316
	Mature cow	32,772	5,493	4.76	262	3.68	202	314
	Total	55,205	5,279	4.76	251	3.67	194	316
	Artifically bred	35,252	5,396	4.82	260	3.70	200	317
	Naturally bred	19,953	5,072	4.63	235	3.61	183	314
	Pure bred	13,615	5,635	4.84	273	3.70	209	329
	Grade	41,590	5,162	4.73	244	3.66	189	311
Holstein/Jersey Cross	2-year old	4,910	5,534	4.28	237	3.45	191	319
	3-year old	4,248	6,095	4.35	265	3.51	214	313
	Mature cow	13,628	6,596	4.33	286	3.48	230	312
	Total	22,786	6,274	4.32	271	3.48	218	314
	Artifically bred	9,479	6,439	4.36	281	3.52	226	314
	Naturally bred	13,307	6,156	4.30	265	3.45	213	314
	Pure bred	0	0	0	0	0	0	0
	Grade	22,786	6,274	4.32	271	3.48	218	314
Guernsey	2-year-old	238	4,983	4.37	218	3.35	167	339
	3-year-old	279	5,714	4.37	250	3.37	193	340
	Mature cow	756	5,728	4.30	246	3.39	194	332
	Total	1,273	5,586	4.33	242	3.38	189	335
	Artifically bred	527	5,679	4.39	249	3.38	192	337
	Naturally bred	746	5,521	4.28	237	3.37	186	334
	Pure bred	190	5,316	4.28	227	3.31	176	347
	Grade	1,083	5,633	4.34	244	3.39	191	333
Ayrshire	2-year-old	430	5,081	4.14	210	3.38	172	326
	3-year-old	534	5,364	4.26	229	3.47	186	315
	Mature cow	1,726	6,012	4.11	247	3.41	205	313
	Total	2,690	5,734	4.14	238	3.41	196	315
	Artifically bred	1,539	5,821	4.19	244	3.47	202	317
	Naturally bred	1,151	5,618	4.07	229	3.34	188	313
	Pure bred	632	5,957	4.09	243	3.30	197	334
	Grade	2,058	5,666	4.16	236	3.45	196	310

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	878	5,846	3.92	229	3.27	191	335
	3-year-old	1,098	6,049	3.95	239	3.29	199	331
	Mature cow	3,520	6,633	3.93	261	3.25	216	319
	Total	5,496	6,390	3.93	251	3.26	208	324
	Artifically bred	2,817	6,630	3.96	262	3.27	217	327
	Naturally bred	2,679	6,138	3.89	239	3.24	199	321
	Pure bred	1,728	6,739	3.84	259	3.22	217	330
	Grade	3,768	6,231	3.97	248	3.28	205	321
Unknown Breed	2-year-old	7,034	5,789	3.92	227	3.33	193	320
	3-year-old	5,651	6,185	3.94	244	3.35	207	318
	Mature cow	57,294	6,378	3.96	253	3.33	212	318
	Total	69,979	6,303	3.96	249	3.33	210	318
	Artifically bred	1,810	7,529	3.84	289	3.32	250	323
	Naturally bred	68,169	6,271	3.96	248	3.33	209	318
	Pure bred	0	0	0	0	0	0	0
	Grade	69,979	6,303	3.96	249	3.33	210	318
Aust. Red Breed	2-year-old	3,225	5,492	4.07	224	3.40	187	319
	3-year-old	2,950	6,027	4.15	250	3.45	208	316
	Mature cow	7,406	6,604	4.13	273	3.42	226	312
	Total	13,581	6,215	4.12	256	3.42	213	314
	Artifically bred	12,376	6,301	4.12	260	3.42	216	315
	Naturally bred	1,205	5,331	4.13	220	3.39	181	310
	Pure bred	1,413	7,198	3.75	270	3.39	244	325
	Grade	12,168	6,100	4.17	255	3.42	209	313
Brown Swiss	2-year-old	559	5,507	3.95	217	3.41	188	332
	3-year-old	686	6,048	3.96	239	3.45	208	336
	Mature cow	2,303	6,603	4.04	267	3.41	225	332
	Total	3,548	6,323	4.01	254	3.42	216	333
	Artifically bred	2,478	6,353	4.06	258	3.44	219	334
	Naturally bred	1,070	6,252	3.90	244	3.35	210	332
	Pure bred	1,357	6,518	3.95	258	3.46	225	352
	Grade	2,191	6,202	4.05	251	3.38	210	322
Other Breeds	2-year-old	98	4,846	3.83	186	3.26	158	306
	3-year-old	99	4,985	3.92	195	3.31	165	317
	Mature cow	416	5,387	4.08	220	3.39	182	309
	Total	613	5,235	4.05	210	3.37	176	310
	Artifically bred	270	5,922	3.93	233	3.36	199	307
	Naturally bred	343	4,695	4.10	192	3.36	158	312
	Pure bred	17	4,444	4.24	189	3.31	147	316
	Grade	596	5,258	4.01	211	3.36	177	310

Since 1999, the percentage of cows calving between February to April has almost doubled (from 14 to 27% of cows).

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	11	10	8	11	20	14	6	2	1
New South Wales	7	9	11	9	9	8	9	9	9	8	7	6
Queensland	9	9	11	8	9	9	9	8	8	8	6	7
South Australia	6	9	11	10	8	6	7	11	13	9	5	4
Tasmania	1	4	5	7	9	2	9	32	22	8	2	0
Western Australia	10	11	11	9	8	6	5	8	11	7	5	6
Australia	3	6	11	10	9	8	10	17	13	7	3	2
Victorian regions												
Northern	1	3	14	13	7	3	7	22	17	8	3	1
Eastern	1	4	10	9	6	7	16	24	15	5	2	1
Western	2	6	9	12	18	17	11	9	9	4	1	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	57,465	8,252	3.75	309	3.19	263	351
Jersey	13,615	5,635	4.84	273	3.70	209	329
Guernsey	190	5,316	4.28	227	3.31	176	347
Ayrshire	632	5,957	4.09	243	3.30	197	334
Illawarra	1,728	6,739	3.84	259	3.22	217	330
Aust Red Breed	1,413	7,198	3.75	270	3.39	244	325
Brown Swiss	1,357	6,518	3.95	258	3.46	225	352
Total	76,400	7,675	3.95	299	3.29	251	346

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	47,297	8,335	3.74	311	3.19	266	352
Jersey	10,737	5,691	4.84	276	3.70	211	329
Guernsey	101	5,493	4.20	231	3.28	180	357
Ayrshire	351	6,076	4.07	247	3.29	200	334
Illawarra	910	6,934	3.87	268	3.22	223	336
Aust Red Breed	1,369	7,217	3.74	270	3.39	244	325
Brown Swiss	994	6,598	3.96	261	3.46	228	355
Total	61,759	7,785	3.94	302	3.29	254	347

Table 13: Victorian production averages 1930/1931 – 2013/2014.

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
2013/2014	1,892	409,743	217	6,709	4.0	270	3.3	225

Australian Breeding Values

Over the past decade, about one-third of productivity improvements achieved by Australian farmers are credited to better genetics. Since ADHIS was established in 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 a proven effective tool to improve the genetic merit of herds.

Because the impact of genetics is gradual and compounding it can be difficult to see the benefits, leading some farmers and advisers to question whether ABVs make a difference. ADHIS is committed to demonstrating the value of genetics in improving herd performance through rigorous scientific analysis. In 2011 a thorough analysis of the issues surrounding fertility in the Australian dairy herd was undertaken by the InCalf team on behalf of Dairy Australia. The study identified trends in dairy herd reproductive performance between 2000 and 2009 and identified the factors that influence fertility. Better herd fertility was strongly associated with the use of ABVs for daughter fertility, among other traits. Figure 10 clearly shows that daughters of bulls with higher Australian Breeding Values (ABVs) for daughter fertility achieve 13% higher 6-week in calf rates compared to their lower ranked counterparts.

Complementing the InCalf research is the 'Feeding the Genes' research undertaken on behalf of ADHIS in 2013. The Feeding the Genes study investigated the relationship between dairy genetics and feeding systems for milk production and cow longevity by analysing data from 505 herds spanning all five feeding systems as defined by Dairy Australia. In all feeding systems, Holstein cows with higher ABVs for milk, fat and protein produced more than their low genetic merit counterparts. Cows sired by high genetic merit sires where also more likely to re-calve by 20 months in most feeding systems and last at least as long in the herd. More information on the Feeding the Genes study can be found at www.adhis.com.au.

Farmers continue to make effective choices in improving their herds' genetic merit for production as demonstrated in Figures 11-13. 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 2014 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 the farmers who have bred this year's top herds.

Figure 10: Daughters of bulls with higher ABVs for daughter fertility achieve 13% higher 6-week in calf rates than their lower ranked counterparts.

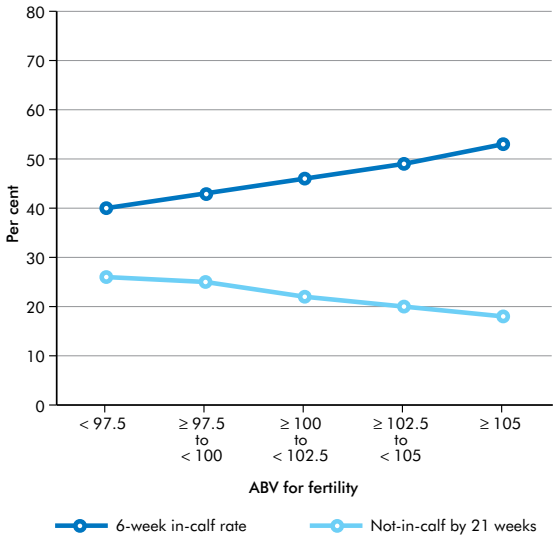
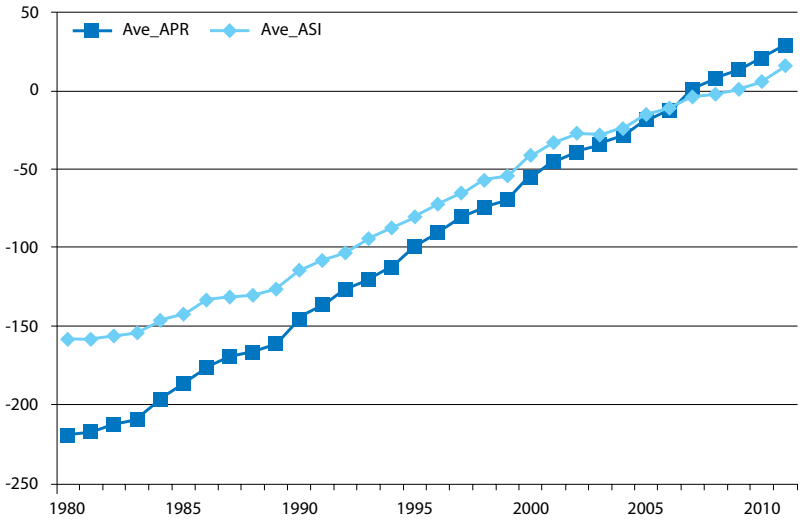
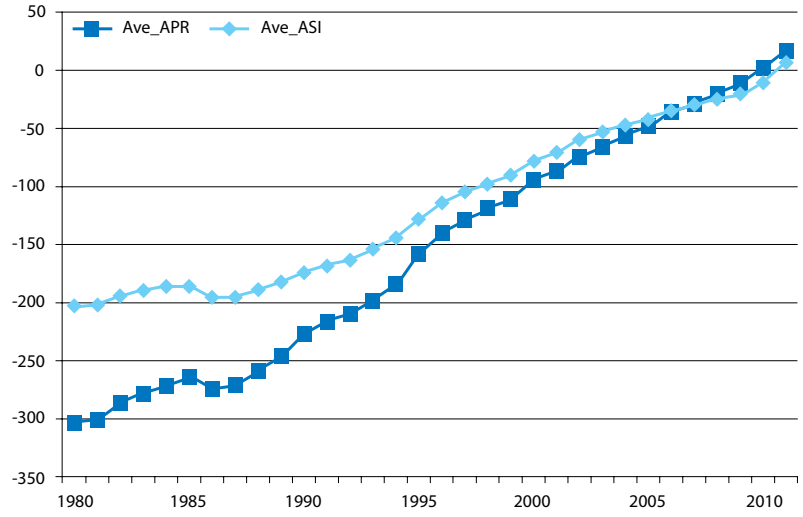


Figure 11: Holstein Cows average APR & ASI by year of birth.



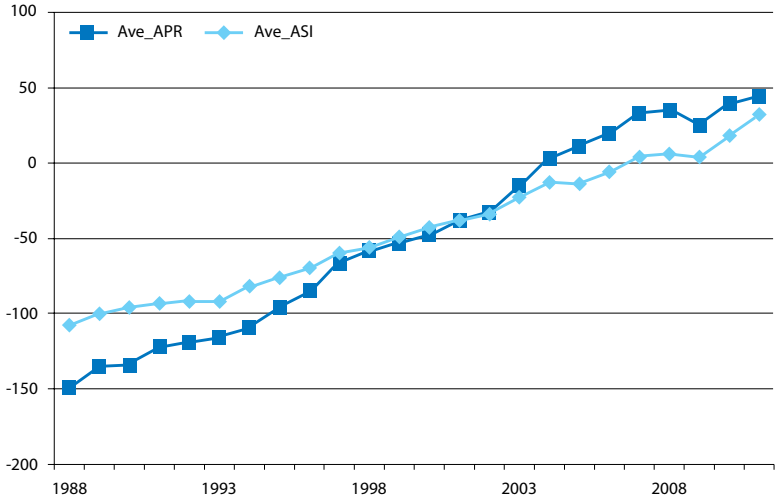
Holsteins are achieving $8.40 profit/cow/year in genetic gain.

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



Jerseys are achieving $11.00 profit/cow/year in genetic gain.

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



Red Breeds are achieving $9.04 profit/cow/year in genetic gain.

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						PROFIT		PRODUCTION				LONGEVITY		TYPE			FERTILITY		
PROFIT RANK	BULL ID	BULL NAME	GENETIC CODES	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	APR	RELIABILITY	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	SOURCE
1	**CANBEE**	COUNTRY ROAD ROUMARE CANBEE		g	A	**370**	79	332	86	91	36	106	64	108	104	76	94	64	ALT
2	**SOLACE**	ECLIPSE ROUMARE SOLACE	CVF	g	A	**309**	72	227	78	39	19	106	58	102	95	64	103	66	GAC
3	**29HO12772**	BALLYCAIRN OMAN PELLO		g	A	**308**	82	160	87	59	25	106	71	96	94	81	112	72	ABS
4	**GOLDCREST**	TOPSPEED GOLDYN-ET	A12,CVF	g	A	**296**	75	220	81	55	28	104	62	101	103	71	101	64	GAC
5	**SHOLTZ**	ST. CLAIR SHOLTZ-TWIN			A	**290**	74	200	82	49	27	105	59	104	103	72	102	62	ABS
6	**29HO12470**	INDIJKS BABYLON	A22	g	A	**286**	88	196	94	219	70	103	75	103	100	83	105	75	ABS
7	**ROUFECTOR**	BUNDALONG ROUFECTOR		g	A	**281**	81	229	87	87	36	107	67	110	108	77	98	69	ALT
8	**REALM**	ECLIPSE ROUMARE REALM	A22,BLF^	g	A	**272**	77	260	84	67	34	105	63	96	100	72	96	67	GAC
9	**WESTGATE**	GALLRAE JOCKO 3438	A22,BLF^	g	A	**269**	84	175	89	94	47	109	70	110	107	78	99	75	GAC
10	**USEAGE**	KAARMONA CALEB	A12,BLF^	g	A	**263**	86	186	92	120	50	107	73	101	109	78	101	79	GAC
11	**CHRISTMAS**	EMU BANKS CHRISTMAS-ET	A22,CVF	g	A	**256**	80	220	86	97	32	104	67	108	101	80	100	67	GAC
12	**DELSANTO**	MANNA FARM DEL SANTO	A22,BLF^	g	A	**255**	88	233	95	324	95	100	73	105	105	75	102	76	GAC
13	**JIFFEY**	RENGAW SHOTTLE JIFFEY		g	A	**255**	79	93	85	68	26	109	64	100	102	72	105	71	AGR
14	**BUDDHA**	BUSHLEA PERFECTOR BOLD-ET	A12,BLF^	g	A	**252**	84	175	90	103	49	105	71	107	104	79	101	71	GAC
15	**DEANCOX**	MANNA FARM DEANCOX	A22,BLF^	g	A	**250**	83	205	88	87	43	105	69	107	103	77	97	72	GAC
16	**7H8081**	ENSENADA TABOO PLANET ET	A22,RDF^	g	A	**250**	96	132	98	520	111	110	89	105	111	96	102	91	GAC
17	**DOLBY**	GUM RIDGES ROUMARE DOLBY	A22	g	A	**247**	75	146	81	54	28	107	60	103	106	68	105	65	GAC
18	**LAIDLEY**	GLOMAR LAIDLEY	BLF,CVF	g	A	**246**	73	180	80	46	21	106	58	100	96	67	103	60	GAC
19	**MOTOWN**	ECLIPSE ROUMARE MOTOWN	CVF		A	**235**	76	177	81	68	34	103	67	101	100	74			GAC
20	**LAZZARO**	GLOMAR LAZZARO	A22	g	A	**228**	76	151	84	82	25	106	58	107	106	66	105	63	ABS
21	**CURIO**	COUNTRY ROAD ROUMARE CURIO	A12,BLF^	g	A	**225**	77	176	83	55	30	105	63	104	102	70	99	68	GAC
22	**CARMARE**	KAARMONA CARMARE	A22,BLF^	g	A	**221**	78	140	84	60	31	106	64	106	103	74	106	68	GAC
23	**SHOTTLE**	PICSTON SHOTTLE		g	A	**217**	98	66	99	2812	456	110	97	108	106	99	106	98	ABS
24	**DELJARDIN**	BUNKERS HILL DELJARDIN	A22	g	A	**216**	74	141	80	53	23	103	60	99	104	69	104	64	GAC
25	**CHICO**	CARENDA CHICO	A22	g	A	**213**	80	128	86	83	37	108	65	106	104	76	99	68	GAC

Holstein Profit - Genomic ABV(g)s

						PROFIT		PRODUCTION				LONGEVITY		TYPE			FERTILITY		
PROFIT RANK	BULL ID	BULL NAME	GENETIC CODES	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	APR	RELIABILITY	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	SOURCE
1	**JUMPON**	RENGAW KMA JUMPON	A22	g	A	**307**	58	253	67	0	0	105	42	105	104	44	99	42	GAC
2	**JUSTLE**	RENGAW MOM JUSTLE		g	A	**305**	56	169	65	0	0	108	39	101	102	42	108	38	AGR
3	**JANEK**	RENGAW JARDIN JANEK	A22	g	A	**304**	67	255	76	18	9	103	49	101	105	50	99	48	ABS
4	**ROYALMAN**	HINDLEE GOLDWYN OMANROYAL 121003	A12	g	A	**300**	63	160	71	0	0	108	49	104	105	52	110	49	GAC
5	**CRVBOUWROCKY**	BOUW ROCKY		g	A	**299**	51	158	62	0	0	109	34	105	104	36	111	34	CRV
6	**DIMAGGIO**	BUNDALONG JETSTAR CANBEE DIMAGGIO	A22	g	A	**294**	60	226	69	0	0	106	44	104	102	47	99	44	GAC
7	**GEEMCEE**	RENGAW MANOMAN HUMMER-ET		g	A	**292**	60	220	69	0	0	104	42	102	102	45	103	42	GAC
8	**PICOLA**	ADLEJAMA DELSANTO PICOLA	A22	g	A	**292**	60	195	68	0	0	104	43	103	105	45	106	44	GAC
9	**WRANGLER**	RENGAW MANOMAN WRANGLER-ET		g	A	**291**	60	188	69	0	0	105	43	100	102	45	108	42	GAC
10	**CRVTOTILLAS**	BARNKAMPER TOTILLAS		g	A	**287**	50	158	58			108	34	104	107	36	107	34	CRV
11	**JENGOLD**	EMU BANKS JENGOLD	A22	g	A	**285**	56	178	65	0	0	104	38	99	99	41	110	40	GAC
12	**JUDGEMENT**	RENGAW ESQUIRE JUDGEMENT		g	A	**285**	58	157	67	0	0	105	40	99	98	40	113	40	GAC
13	**STARSHIRAZ**	JET STAR DELSANTO SHIRAZ	A22	g	A	**279**	66	230	75	0	0	103	50	104	107	53	104	50	GAC
14	**OTTMAR**	DILEE BUDDHA OLLIE 751	A12	g	A	**278**	57	171	66	0	0	106	41	102	103	43	103	41	GAC
15	**DAMANI**	MANNA FARM KMA 2341		g	A	**276**	57	229	66	0	0	104	41	102	102	42	100	41	GAC
16	**SASSOCAR**	KAARMONA SASSOCAR	A22	g	A	**276**	58	189	67	0	0	106	40	102	103	42	105	40	GAC
17	**CRVGLAMORGAN**	GLAMORGAN FREDDIE TIFFANY	A22	g	A	**274**	56	185	65	0	0	104	40	100	102	41	107	40	CRV
18	**NARDOO**	HILL VALLEY SS NARDOO	A22	g	A	**274**	50	162	60	0	0	108	33	103	104	35	105	33	GAC
19	**CRVTITANIUM**	DELTA TITANIUM		g	A	**273**	58	120	66	0	0	108	43	100	99	44	112	44	CRV
20	**ARMAND**	HILL VALLEY O ARMAND	A22	g	A	**270**	61	172	69	0	0	106	45	100	98	48	105	45	GAC

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**

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Jersey Profit - Proven Australia

						PROFIT		PRODUCTION				LONGEVITY		TYPE			FERTILITY		
PROFIT RANK	BULL ID	BULL NAME	GENETIC CODES	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	APR	RELIABILITY	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	SOURCE
1	**NAVARIAN**	COLNARCO NAVARIAN	A12	g	A	**330**	74	268	82	60	32	104	56	107	109	63	101	60	GAC
2	**TBONE**	RICHIES JACE TBONE A364	A22	g	A	**271**	90	194	95	229	59	108	80	115	112	90	100	83	AGR
3	**ELTON**	CAIRNBRAE JACES ELTON		g	A	**267**	97	216	99	2431	327	105	89	113	107	95	99	95	ABS
4	**CSCAMBITION**	RIVERSIDE AMBITION		g	A	**262**	73	213	79	47	22	103	59	105	110	69	104	59	ABS
5	**SANDBLAST**	NOWELL SANDBLAST	A22	g	A	**261**	88	209	94	268	74	98	73	101	108	83	106	74	AGR
6	**RACEWAY**	ABERDEEN VALERIAN SANDOWN-ET	A22	g	A	**249**	81	207	86	93	37	106	67	110	113	81	99	66	GAC
7	**TENGEN**	MOROKA TENGEN	A22	g	A	**234**	75	195	83	63	26	103	57	100	103	65	103	58	GAC
8	**MAXAPPEAL**	RIVERSIDE MAXIMUM APPEAL	A12	g	A	**232**	71	173	78	37	21	106	53	105	101	61	100	60	ABS
9	**LOCKSMITH**	WHITE STAR LOCKSMITH	A22	g	A	**223**	74	167	81	57	28	103	60	101	94	71			GAC
10	**VANAHLEM**	PANNOO ABE VANAHLEM		g	A	**214**	88	152	94	324	95	107	73	116	110	87	95	69	ALT
11	**ROUNDHILL**	ABERDEEN VALERIAN ROUNDHILL-ET	A22	g	A	**213**	73	150	80	58	29	105	56	108	106	65	103	61	GAC
12	**BOSMURMUR**	OKURA LIKA MURMUR S3J	A22		A	**210**	89	164	95	270	46	102	73	96	95	87	101	69	CRV
13	**BROADSIDE**	BROADLIN 2420 SPIRITUAL	A22	g	A	**206**	75	165	81	56	35	104	61	105	105	73	98	58	GAC
14	**LARFALOT**	LIGHTWOOD LUCRATIVE	A22	g	A	**202**	97	171	99	1781	280	105	90	110	104	95	97	94	GAC
15	**VASILIS**	KAARMONA VASILIS		g	A	**196**	73	180	81	57	21	105	55	104	100	60	97	62	AGR
16	**VAVOOM**	ROCKLEIGH PARK VALERIAN VAVOOM	A22	g	A	**191**	77	170	84	70	27	104	58	99	97	65	100	63	ABS
17	**ARIES**	NOWELL ZODIAC		g	A	**189**	74	146	80	52	18	102	59	96	98	69	102	64	CRV
18	**SOVANN**	KAARMONA SOVANN-ET	A22	g	A	**188**	82	145	88	120	52	104	68	104	98	81	102	64	GAC
19	**TAILBOARD**	NOWELL TARSAN	A12	g	A	**186**	97	152	99	1397	253	102	93	105	103	90	98	96	GAC
20	**GAINFUL**	KAARMONA GALEAO	A12	g	A	**182**	83	146	89	89	48	104	69	112	112	72	95	75	GAC
21	**AMBMANHATTEN**	OKURA MANHATTEN-ET SJ3		g	A	**175**	98	196	99	1827	261	100	96	97	93	95	97	97	CRV
22	**VALERAGAY**	BROADLIN 2429 VALERIAN	A12	g	A	**154**	77	116	84	68	30	104	59	101	97	66	99	64	GAC
23	**DELIAN**	LOXLEIGH DELIAN	A22	g	A	**149**	78	136	85	78	44	105	60	113	107	66	99	65	GAC
24	**SARATOGA**	BERCAR SARATOGA	A22	g	A	**134**	95	64	98	477	153	106	88	102	101	85	103	92	GAC
25	**BETAHEAD**	KINGS VILLE OUTDO	A12	g	A	**132**	85	108	90	117	46	102	71	106	98	73	97	77	GAC

Jersey Profit - Genomic ABV(g)s

						PROFIT		PRODUCTION				LONGEVITY		TYPE			FERTILITY		
PROFIT RANK	BULL ID	BULL NAME	GENETIC CODES	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	APR	RELIABILITY	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	SOURCE
1	**DOUBLEUP**	BROADLIN DOUBLEUP	A22	g	A	**332**	44	307	54	0	0	104	26	101	101	29	100	24	GAC
2	**CAIRNBONE**	CAIRNBRAE TBONE ENSIGN		g	A	**292**	66	223	74	16	6	106	49	108	113	56	101	43	ALT
3	**CSCEDISON**	CAIRNBRAE TBONE EDISON		g	A	**289**	59	256	68	12	7	102	41	101	103	46	99	39	ABS
4	**LEVIGENES**	BROADLIN LEVI	A12	g	A	**280**	52	235	60	0	0	106	35	109	104	39	97	34	GAC
5	**SANDSTORM**	KADDY ELTON SANDSTORM	A22	g	A	**272**	60	243	67	0	0	102	46	101	100	49	96	45	
6	**CRVBRAX**	PANNOO BRAX	A22	g	A	**266**	49	196	59	0	0	109	32	120	112	36	97	31	CRV
7	**BORAT**	BROOKBORA TBONE BORAT	A22	g	A	**265**	52	202	61	0	0	106	36	106	104	40	98	35	GAC
8	**STACKER**	BROADLIN STACKER	A12	g	A	**253**	47	219	56	0	0	103	31	107	105	34	101	30	GAC
9	**CRVVOYANT**	MERSEYBANK CLAIRVOYANT		g	A	**252**	47	190	58	0	0	105	29	106	105	31	102	29	CRV
10	**KEVIN**	WHITE STAR KEVIN	A22	g	A	**249**	54	194	62	0	0	106	39	102	100	43	100	37	GAC
11	**CRVSANDRIFT**	KADDY ELTON SANDRIFT		g	A	**243**	59	202	67	0	0	105	45	106	103	48	96	44	CRV
12	**SHAQ**	NOWELL SHAQ		g	A	**243**	57	181	64	0	0	105	42	107	105	46	102	41	
13	**CONNIE**	BROADLIN CONNIE	A22	g	A	**242**	53	187	62	0	0	104	36	110	109	41	99	35	GAC
14	**VALAIS**	WHITE STAR VALAIS	A22	g	A	**239**	69	230	79	49	19	102	44	98	100	44	99	56	GAC
15	**JULSTAR**	WHITE STAR 5281 JULIAN	A22	g	A	**238**	51	181	59	0	0	102	36	109	109	38	105	35	GAC
16	**VISTAWALL**	WALLACEDALE MELS VISTA	A22	g	A	**238**	57	166	66	0	0	106	42	104	102	44	101	41	GAC
17	**ZORKO**	BEULAH GALV 4090	A22	g	A	**236**	48	211	57	0	0	103	32	104	104	35	99	31	GAC
18	**CSCTRESBON**	GELBEADO PARK TRESBON		g	A	**236**	52	187	61	0	0	103	37	107	103	40	98	36	ABS
19	**FREEVODKA**	MELDAN SB FREDO	A22	g	A	**235**	54	179	62	0	0	101	39	105	106	42	105	38	GAC
20	**011JE01134**	BROOKBORA TBONE BARCARDI		g	A	**234**	55	165	64	0	0	107	39	107	106	44	99	37	ALT

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2014 Australian Breeding Values – Good Bulls Guide

THE Good Bulls GUIDE

August 2014

Red Breeds Profit - Proven Australia

							PROFIT		PRODUCTION				LONGEVITY		TYPE			FERTILITY		
PROFIT RANK	BULL ID	BULL NAME	BREED	GENETIC CODES	AUSTRALIAN PROVEN OR INTERNATIONAL		APR	RELIABILITY	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	SOURCE
1	**ATOSIKKO**	ASMO TOSIKKO	U	A22	A		**262**	83	174	90	102	15	106	64	108	106	84	100	78	VIK
2	**FASTRUP**	R FASTRUP	U		A		**202**	82	113	88	79	13								VIK
3	**VRSOLERO2851**	VR SOLERO	U		A		**200**	72	168	83	34	10	99	41						VIK
4	**ARBBONJOVI**	BOSGOWAN BON JOVI	U	A22	A		**194**	90	146	96	447	125	103	73	102	102	79	106	79	GAC
5	**ARBPOTSIE**	GRAZIN POTSIE	U	A12	A		**189**	84	133	91	122	52	104	66	94	92	65	106	74	GAC
6	**ARBLEVER**	LOUVIC LEVER	U	A12	A		**166**	74	120	84	74	33	103	51	106	106	56	101	56	GAC
7	**ARBHILLY**	BEAULANDS HILLY	U	A12	A		**165**	53	114	60	21	9	104	37	108	107	40			GAC
8	**RANDERSDAVID**	R DAVID	U		A		**155**	86	58	91	104	22	111	74	104	103	78	103	83	VIK
9	**ARBBOBDOWN**	LODEN BOB	U	A12	A		**146**	95	163	99	1647	238	104	85	104	100	86	96	93	GAC
10	**ARBLIPPMAN**	BOSGOWAN LIPPMAN	U	A11	A		**146**	82	116	91	123	40	103	60	106	107	51	98	71	GAC
11	**ARBLONGBOW**	LOUVIC LIBBA	U	A12	A		**146**	78	89	88	96	38	104	54	103	101	54	101	64	GAC
12	**ARBBALTIC**	CALISTER BONO	U	A22	A		**144**	77	85	88	109	48	102	51	98	98	54	101	54	GAC
13	**RBANGKOK**	R BANGKOK	U		A		**144**	88	19	94	195	16	109	70				102	84	VIK
14	**ARBFROSTY**	MERIBEN PARK JACK FROST	U	A22	A		**141**	79	85	88	92	38	103	57	102	104	62	102	63	GAC
15	**ARBLAWRENCE**	BOSGOWAN LAWRENCE	U	A12	A		**138**	97	33	99	1632	292	107	94	105	100	88	108	97	GAC

Guernsey Profit

				PROFIT		PRODUCTION					LONGEVITY		TYPE			FERTILITY		
RANK	BULL ID	BULL NAME	AUSTRALIAN PROVEN OR INTERNATIONAL	PROFIT $	RELIABILITY	PRODUCTION	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	FOREIGN DAUGHTERS FIRST	SURVIVAL	RELIABILITY	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	FERTILITY	RELIABILITY	SOURCE
1	**ICYICEBERG**	SPRING WALK ICY ICEBERG	I	**146**	57	148	69			82	100	45	103	100	58	102	58	AGR
2	**BOSGEO**	GOLDEN J LES GEORGE	I	**117**	52	107	60			123	103	36	108	105	50	98	49	AGR
3	**AUSFAYSBOO**	KOOKABURRA FAYS BOO	A	**113**	75	45	88	94	30		108	56				100	67	
4	**7G405**	GOLDEN J RONALD GRUMPY	I	**107**	52	67	63			221	103	38	104	106	53	100	60	GAC
5	**7G398**	SNIDERS RONALDS ALSTAR	I	**99**	56	48	68			204	102	42	104	101	57	97	61	GAC

Brown Swiss Profit proven Australia

				PROFIT		PRODUCTION				LONGEVITY		FERTILITY		
RANK	BULL ID	BULL NAME	AUSTRALIAN PROVEN OR INTERNATIONAL	PROFIT $	RELIABILITY	PRODUCTION $	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	SURVIVAL	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	SOURCE
1	**GGEVENT**	EVENT	A	**155**	76	77	89	103	32	107	57	101	66	ABS
2	**GGHURAY**	HURAY	A	**108**	60	76	78	52	12			104	34	ABS
3	**SWISSEDGE**	ELM PARK JUPITERS EDGE	A	**104**	86	38	96	318	84	102	76	105	84	GAC
4	**BOSPIUS**	SUPERBROWN PIUS	A	**94**	41	78	56	19	10					CRV
5	**76B0900**	VICTORY ACRES SIMON EVEN	A	**88**	75	31	87	79	37	103	57	98	66	

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2014 Australian Breeding Values – Top Herd Summary

Top Holstein herds based on herd average APR, August 2014 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	Wagner G	Winnaleah	7265	T63SWAA	3,209	155	56	130	103	16	0.04	519	22	-0.01
2	Kitchen Farms	Boyanup	6237	W00248F	1,949	386	84	121	92	14	0.07	380	18	0.02
2	Henry TW & TC	Tinamba	3859	240108T	2,449	503	324	121	91	15	0.06	422	15	-0.04
4	Hogg A & J	Biggara	3707	C00155U	861	169	90	120	103	15	0.12	321	17	0.04
5	Dickson BJ & JL	Terang	3264	850441U	2,932	849	268	109	89	15	0.06	432	13	-0.08
6	Parrish TJ & LR	Barrengarry	2577	N00544Q	1,262	176	39	108	77	12	0.06	310	15	0.02
7	Sprunt RG	Kaarimba	3635	C01125S	487	185	86	105	69	12	0.00	457	13	-0.09
8	Anderson WR & BL	Kongwak	3951	540597R	1,298	268	107	104	88	14	0.07	374	14	-0.02
9	Johnston R & L	Bundalaguah	3851	240024G	2,082	605	0	102	79	14	0.01	496	16	-0.08
10	Perrett RJ & HE	Kongwak	3951	540624E	715	289	13	100	80	16	-0.03	658	13	-0.21
10	Walder RG & CA	Heathmere	3305	840404W	867	157	0	100	72	9	0.09	178	14	0.09
12	Cook RJ & JP	Edi Upper	3678	C00276F	2,042	570	40	97	82	14	0.05	401	14	-0.05
13	Uebergang IS & JA	Gorae West	3305	840391T	299	61	0	95	79	14	0.05	407	10	-0.10
14	Willcocks P & I	Yankalilla	5203	S00047P	920	205	82	94	57	11	-0.02	443	12	-0.10
15	Hoey DM & L	Katunga	3640	4I0025F	76	48	15	93	77	11	0.08	263	13	0.02
16	MacQueen AD & GL	Yanakie	3960	540139F	1,313	230	124	89	75	12	0.09	248	10	-0.01
16	McRae SA & NM	Nambrok	3847	2K0054J	591	393	84	89	69	11	0.06	276	12	0.01
18	Lia TO & PM Pty Ltd	Nilma North	3821	540184S	699	197	0	87	82	14	0.01	477	18	-0.04
18	Lambalk J & J	Timboon	3268	650274B	1,354	429	0	87	64	10	0.07	233	10	0.00
20	Coster B & M	Ripplebrook	3818	981306Q	2,095	855	271	85	72	11	0.07	268	12	0.00
20	Heywood GA	Yarragon	3823	240851B	1,108	247	0	85	63	9	0.08	173	10	0.04
22	Green RJ LM & AE	Tamworth	2340	N00416Q	752	169	47	82	63	12	0.02	390	8	-0.12
23	Moscript ME CJ & JM	Leongatha Sth	3953	540300E	877	195	0	80	55	11	-0.01	444	9	-0.15
24	Coates JD	Allestree	3305	840377M	1,115	239	0	78	61	10	0.03	298	11	-0.02
25	Fielding R & D	South Riana	7316	T34GFJM	1,651	390	0	76	59	8	0.07	157	10	0.05
26	White KL & DM & RL	Leongatha Sth	3953	540605F	1,350	391	207	75	66	10	0.05	293	12	-0.01
27	Kennedy R & M	Cobains	3850	240025J	1,481	228	0	73	56	10	0.00	369	10	-0.08
27	Lister Craig A SP	Calivil	3573	4A3216P	1,123	291	168	73	56	11	0.01	382	9	-0.11
27	Lawry AK & PM	Dingee	3571	4A1819R	2,341	490	121	73	52	9	0.03	258	8	-0.05
27	Lillico JM & V	Smithton	7330	T13AHMV	3,164	771	0	73	49	9	0.01	328	8	-0.08
31	Little JR & SL / Martin D &	Korumburra	3950	540600N	999	114	0	72	60	9	0.07	188	11	0.04
31	Derix GM & ME	Maffra	3860	270031H	793	132	58	72	45	5	0.08	25	8	0.10
33	Walker AH & AR	Yinnar South	3869	981403K	500	87	0	71	62	9	0.05	222	13	0.05
33	Flemming GM & PE	Tocumwal	2714	4A1373N	1,343	263	114	71	58	9	0.04	268	11	-0.01
33	Pekin JF, A & JG	Terang	3264	850550V	1,217	342	0	71	57	8	0.06	188	9	0.01
33	Holt Family Trust	Bundalaguah	3851	240111W	1,022	73	0	71	55	6	0.09	47	10	0.11
37	Woodbine Holdings Pty	Lancaster	3620	B20571E	2,612	807	0	70	60	11	0.04	319	7	-0.09
37	Tracy S	Waratah Bay	3959	540162K	1,824	195	24	70	59	9	0.07	209	7	-0.02
37	TF Hutton And Sons	Whcl0070	6271	W00088D	2,071	480	0	70	55	5	0.13	-65	9	0.17
37	Glasgow DC & EJ	Bena	3946	540564F	624	150	0	70	54	11	0.02	359	7	-0.13
41	Oanwayje Farms	Longwarry	3816	5C0049C	1,708	761	407	69	59	8	0.08	146	11	0.06

2014 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 2014 ABVs														
1	Hoey DM & L	Katunga	3640	240699A	1,047	222	135	111	93	10	0.22	-13	17	0.33
2	Glennen & CO C	Terang	3264	850588C	2,658	440	48	104	84	7	0.24	-133	18	0.47
3	Worboys R & A	Kotta	3565	C00993T	1,119	212	0	85	60	5	0.17	-82	12	0.32
4	Boley Messrs PJ J	Karridale	6288	W00095S	521	42	0	78	74	8	-0.06	326	30	0.24
5	Wyss Trading P/L	Boorcan	3265	850604I	1,295	97	0	72	50	2	0.18	-192	15	0.47
6	McManus BT & CA	Bamawm	3561	C00935T	734	158	0	70	52	5	0.15	-67	9	0.25
7	Moscript ME CJ & JM	Leongatha Sth	3953	540300E	1,012	98	18	66	40	2	0.14	-138	12	0.37
8	Bryce D & S	Allansford	3277	SO0002U	68	67	12	63	42	6	0.06	81	5	0.02
9	Codling & Baker	Larpent	3249	740064P	658	130	0	62	52	2	0.25	-289	10	0.49
10	JS & KL Tanner	East Framlingham	3265	841827A	310	40	0	60	29	2	0.09	-61	7	0.19
11	Bacon C & N	Lockington	3563	C01682H	587	211	0	58	41	5	0.10	3	6	0.11
12	Howie RH & JA	Heyfield	3858	240270F	356	58	0	57	32	4	0.04	58	7	0.08
12	Bacon RLG & SL	Tennyson	3572	C00859H	1,741	293	82	57	31	3	0.06	10	6	0.11
14	Briggs RG & EH	Nanneella	3561	C00998L	318	44	0	56	49	5	0.13	-31	7	0.16
14	Van Den Bosch JH & CA	Lockington	3563	C00927B	377	57	0	56	38	1	0.19	-232	8	0.38
16	Smethurst Byron &	Timboon	3268	650400L	579	75	63	54	38	6	0.03	133	4	-0.06
17	Hill AJ, CA, SG & BF	Kolora	3265	850478V	652	203	0	53	40	3	0.13	-97	9	0.26
17	Akers R & H & G	Tallygaroopna	3634	C00637Q	1,484	479	77	53	40	4	0.09	-18	9	0.18
19	Balnageith Jersey Stud	Warragul	3820	260037W	1,133	325	0	52	28	3	0.07	1	4	0.08
20	Broad L & L	Lockington	3563	240684H	1,228	276	53	51	41	6	0.05	116	5	-0.02
Top Red Breeds herds based on herd average APR, August 2014 ABVs														
Ayrshire														
1	Johnstone B & R	Hawksdale	3287	SM0023T	68	68	0	-6	3	-2	0.06	-198	1	0.14
2	Howlett VW & JS	Drumborg	3304	840369R	449	58	0	-124	-112	-15	-0.09	-383	-25	-0.12
3	Hyland MI & JR	Pinelodge	3631	C00642C	1,071	148	0	-136	-112	-15	-0.12	-334	-21	-0.10
4	Pump GJ & AFS	Sheffield	7306	T37KPUB	101	41	0	-141	-113	-17	-0.05	-535	-25	-0.04
Illawarra														
1	Blue Range Pastoral Co	Allora	4362	Q01283M	218	51	0	-36	-25	-2	-0.05	-2	-5	-0.07
2	Carson JH & GL	Irrewillipe	3249	740170H	62	36	0	-46	-41	-3	-0.08	36	-10	-0.17
3	Chelmonte Farming	Brymaroo	4403	Q00203D	1,322	196	0	-52	-52	-10	0.00	-370	-7	0.12
4	Williams G P & R C	Meningie	5264	4A1868T	1,238	335	0	-58	-45	-6	-0.04	-124	-11	-0.09
Aussie Red														
1	Graham RW & BC	Numbaa	2540	N00555U	1,404	536	0	90	42	5	0.04	120	9	0.06
2	Raleigh, Jan	Timboon	3268	650244V	702	224	0	84	37	5	0.06	49	6	0.05
3	Leppin T & LJ	Bena	3946	540557N	1,425	424	0	80	36	5	0.06	59	5	0.04
4	Waltham GV & JL	Glengarry	3854	240345U	590	199	0	74	35	4	0.08	7	4	0.05
Top Brown Swiss herds based on herd average APR, August 2014 ABVs														
Brown Swiss														
1	Restdown Pastoral	Rochester	3561	C00871I	1,697	509	0	-2	-1	0	0.01	-21	-1	0.01
2	Brown E & Fisicaro S	Yalca	3637	4K0080C	106	74	0	-5	-2	0	0.01	-20	-1	-0.01
3	Cooltah P'ship	Narromine	2821	N01423J	612	202	0	-6	-4	0	-0.01	5	-2	-0.05
4	Balfour PE & SM	Girgarre	3624	B21285J	467	196	0	-9	-5	-1	0.01	-36	-2	0.00