Australian Dairy Herd Improvement Report 2015

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.

ADHIS acknowledges the contribution of the Victorian Department of Economic Development, Jobs, Transport and Resources.

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

Photo acknowledgements: Thank you to Trevor Parrish, Craig Lister, Jason Birmingham and Jo Timperon, for supplying photographs and to all of the farmers who took time away from their businesses to enthusiastically participate in the photographs that appear in this report.

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 has been a momentous year for the herd improvement sector in Australia.

For many years the sector has tried to find a way towards a more integrated and collaborative structure. Recognising the existence of too many 'silos' seemed easy compared to finding a solution where the industry can work together to improve the productivity of dairy farmers in Australia.

NHIA has been pleased this year to work with a number of our industry colleagues at Dairy Australia and ADHIS, among others, on the Herd Improvement Industry Strategic Steering Group (HIISSG) to chart a way forward. Although sometimes slow, a great deal of progress has been made that will, I believe, have great benefits in the future.

We would especially like to acknowledge the leadership shown by Dr Matt Shaffer of Dairy Australia in this process.

It is vital that dairy farmers in Australia have access to the very best in herd improvement services and the service providers who make up the membership of NHIA work extremely hard to ensure that their customers have a wide variety of options in both herd testing as well as breeding, genetics and reproduction.

NHIA is co-investing in a number of research projects at present that we hope will lead to new and improved processes and products for herd testing. It is important that the Association and its members remain at the centre of animal performance recording. While it is too soon to talk about any results yet, we are optimistic about the project outcomes and look forward to communicating the results in due course.

The scientific advances made in the field of genomics in recent years have brought dramatic change to the artificial insemination sector. 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 measure updated phenotypes to be current and relevant for our breeding programs today. Herd testing and linear classification will continue to be very important in the future.

I would like to thank our industry partners, Dairy Australia, ADHIS, the Victorian Government and all NHIA members for their contributions in the past twelve months. It is in working together that we can utilise the collective strengths that exist and which make the Australian dairy industry such a resilient and strong sector.

ADHIS Chairman's report

By John Harlock
ADHIS Chairman

Collaboration is integral to almost everything ADHIS does. While this year has seen some exciting achievements, it's important to recognise that none would have been possible without the contribution from our various partners. Australia's dairy herd improvement progress comes from the combination of world leading science and technology, input from the grass roots and contributions from the many organisations involved in between.

New indices

This year has seen the delivery of some major improvements to breeding tools available to dairy farmers, most notably Australia's three new indices. All have been received very favourably by industry, particularly farmers who welcome being able to choose an index that is aligned to their breeding priorities. Their development was based on an exhaustive consultation process conducted in 2014 which gave the clear message that farmers wanted indices to help them breed for profit as well as other priorities, particularly health and type.

Feed Saved ABV

With feed being a major cost in milk production, dairy farmers welcomed the arrival of the Feed Saved ABV in April. Developed by the Dairy Futures CRC, the Feed Saved ABV broke new ground as the first use of genomics to measure a trait that can't be routinely measured on farm. While Australia is the first country in the world to provide a feed efficiency breeding value based on real feed intake data, it wouldn't have been possible without an international collaboration of scientists. The Feed Saved ABV is based on data from an eight year project that measured the feed intake of almost 2000 heifers in Australia and New Zealand; combined with genomic results from the Netherlands and UK.

Herd 15

ADHIS was delighted to again join with Holstein Australia and NHIA in hosting the biennial conference, Herd 15, which attracted more than 200 delegates from the dairy herd improvement industry. Herd 15 was the fourth conference in the series which began in 2009. Each event has attracted more delegates, having earned a reputation for offering exciting and relevant presenters and a unique opportunity to gather with others who are passionate about genetics.

New initiatives

Collaboration in the herd improvement sector is set to be taken to another level with initiatives under development by the Herd Improvement Industry Strategic Steering Group (HIISSG).

The coming year will see some exciting initiatives come to fruition that will allow the herd improvement industry to derive greater value from herd recording and other data.

Thankyou

I'd like to thank our out-going Chairman, Adrian Drury, who has led ADHIS through a sustained period of intense development. Some of the key initiatives under Adrian's leadership have been the introduction of genomics, the Good Bulls Guide, the Feed Saved ABV and the review of the National Breeding Objective. He has left ADHIS in a good position for the changes ahead.

Thanks also to our many collaborators, including the Victorian Government and Dairy Futures CRC team, herd improvement organisations and the people from the field who keep us in touch with what's needed by industry and what's possible with technological advances.

And finally, I'd like to thank the staff of ADHIS for their on-going passion for dairy breeding and their commitment to delivering a quality service to industry. It is their determination on a daily basis to get the job done, regardless of the inevitable challenges that enables ADHIS to deliver value to the dairy industry.

A message from The Herd Improvement Industry Strategic Steering Group (HIISSG)

By Simone Jolliffe
Chair, HIISG

The Herd Improvement Industry Strategic Steering Group (HIISSG) is a collective of industry experts and representatives who have come together to drive the implementation of the Herd Improvement Strategy 2020.

The bringing together of a broad group of Herd Improvement businesses with not-for-profit industry groups under the HIISSG banner enabled an industry-wide bid to address barriers to herd improvement. The HIISSG members did this by focusing their energies on the pre-competitive space and as a consequence the process will bring about transformative change in the herd improvement industry.

HIISSG, through a series of taskforces, set about the implementation of the Herd Improvement Strategy in a manner that concurrently tackled the big picture leadership, capability, structural and governance challenges; the value proposition of Herd Improvement (primarily through the Gardiner Foundation's ImProving Herds project but also through driving efficiencies); while at the same time developed a range of practical tools and initiatives that delivered some immediate and tangible outcomes. The latter was a demonstration that collaboration in the pre competitive space was possible and as a consequence would make a direct contribution to farm profit.

HIISSG members and the sectors they represented were united in their vision. For example, they all agreed that:

- Genetics must be broadly accepted as a driver of farm profit – and to do that we needed to increase the number of farmers and advisors who recognise, promote and make decisions based on the link between genetic improvement and profit using Australian Breeding Values; and
- We needed a vibrant herd improvement industry offering effective and highly valued services, in order for farmers to make better herd management decisions and as a consequence drive farm productivity and profit.

In a comparatively short time frame, HIISSG has produced:

- A Good Bulls Smart Phone App (in partnership with ADHIS), that manages to combine user-friendliness with sophistication in order to provide a really practical way to sort bulls, create a bull list and make your semen order. Not only will this promote greater use of bulls listed in the Good Bulls Guide (that we know will drive profit improvements) the App is still promoting and driving an interface with your preferred semen supplier;
- A herd test report dashboard that will mean that by mid-2016, herd test reports will comprise a snapshot of herd health and performance, together with alerts and herd trends in the equivalent of two A4 pages;
- A series of feature articles that showcase the works and capability of Australia's dairy geneticists – encouraging industry pride in not only the skills of this team, but their understanding of, and affinity for the industry they serve.

Throughout its tenure, HIISSG has been a strong advocate of the Gardiner-funded ImProving Herds project – considering this as the vehicle to provide the ultimate cost benefit demonstration of herd improvement. This project recognises that quantifying the benefit to farm profitability of best-practice herd improvement strategies, is best done when farmers go on a journey of 'assisted

self-discovery' and then tell other farmers! HIISSG considers ImProving Herds a valuable new route to market that brings to the fore the best available genetic management tools in a new format.

Without doubt, the unity created through the HIISSG initiative was a key factor in industry securing a highly competitive Australian Government R&D for Profit funding that will drive the next phase of profit-driver tools.

The Herd Improvement Strategy 2020 clearly said we were desperate for new and improved herd improvement services. As a consequence we now have a project that could turn the application of herd recording 180 degrees.

Instead of using herd recording data as an historical record of what has just occurred, the technology now exists to use a milk sample to offer *predictions* of a cow's health performance over her life time. If this research project validates the technology in Australian conditions, it should mean that Australian dairy farmers will be able to manage and select their cows for the major drivers of profitability – production, feed efficiency, fertility, health and longevity – using data collected from milk samples.

While these works are going on, the single biggest challenge for the HIISSG collective has been to oversee the rationalisation of all relevant, pre-competitive herd improvement functions into a single entity.

The Herd Improvement Strategy 2020 clearly recommended a new model/structure that embraced genetics, herd testing standards and data systems, was required to effectively deliver on the vision.

With a working title of 'NewCo' (New Company), the process of re-shaping the role of herd improvement in Australia by drawing together all relevant, pre-competitive herd improvement functions, is under way.

NewCo will work to deliver the long-held vision of a unified data repository, centralising the data collected by all Herd Improvement companies irrespective of their current IT platform.

But it will do much more than that.

This database system would facilitate a quantum leap in the capabilities of genetic evaluation and decision making and provide the value-add to herd improvement that industry has been seeking. This comes in large part due to the expected incorporation of on-farm data collected through various software packages that do not currently talk to the other industry databases. The driving principle from a farm perspective is single-entry, multi-use.

These developments will help improve data quality standards and so underpin quality assurance standards to support genetic evaluation and to create other services that are world's best practice.

The HIISSG collective has highlighted that transformative change is possible in an environment of shared vision.

It is exciting times in this space.

ADHIS activity report

By Daniel Abernethy, ADHIS General Manager

2015 has been a year of delivering on a range of key initiatives and improved service delivery. Such initiatives and improvements were implemented in response to the many conversations with our various stakeholders during the 2014 review of the national breeding objective.

Launch of the New Indices

The most visible improvements to customer service for dairy farmers have been the delivery of the three new indices (BPI, HWI and TWI) and the Feed Saved ABV with the April ABV release. The delivery of these new indices was in a direct response to farmer and industry requests to provide greater alignment between farmers breeding objectives and the selection indices ADHIS produces. The new indices followed extensive industry consultation which has resulted in indices which directly relate to what farmers have told us is important to them.

A major initiative for 2015 has been to communicate these changes to our customers with the aim of reaching a far broader audience than we have in the past. The team delivered an innovative campaign, utilising both traditional and social media as well as face-to-face communication with farmers, their advisors and others in the artificial breeding industry.

The ever-popular Good Bulls Guide was revamped to align it with the new indices.

Our aim is to continually make it easier for farmers to select bulls that meet their individual breeding priorities. In an era of constantly changing technologies we have a number of initiatives under way to make breeding data more accessible, and in interactive formats.

For example, an app version of the Good Bulls Guide is under development. Rather than replacing the current format, this app will provide an additional, interactive platform and incorporate some of the functionality of the extremely popular, 'Displayabull' web tool.

Genomic Testing and Research

This year saw a leap in the number of dairy animals genotyped with industry partner Zoetis commencing a commercial dairy genomic testing service in conjunction with Holstein Australia. When the service was introduced in 2009, the main use was AB companies testing the genetic merit of young sires that may enter their bull teams. In the past year or so increasing numbers of dairy farmers are having females tested to guide their breeding decisions and fast-track genetic gain. Services for dairy farmers are still evolving and ADHIS has been working with Holstein Australia and Zoetis to develop services and reports that are relevant and user-friendly.

In addition to genomic testing by bull breeding companies and farmers, more than 40,000 animals have been genotyped as part of industry initiatives to 2015. These initiatives are aimed at continual improvement in genomic technology and the reliability of ABV(g)s for young sires. ADHIS acknowledges the significant contribution from the Dairy Futures CRC in driving the science behind genomic evaluations.

Industry Tools and Service Delivery

ADHIS' web-based facilities are 'tools of the trade' for many dairy farmers, bull companies and herd recording organisations. Users of the Displayabull tool will have noticed improvements to its searching capabilities. The inclusion of additional filters and use of common bull names makes it faster to find the right bull from the database of 300,000 animals.

Improving fertility and the health of our herd has been our top breeding priority for some time so the Health Weighted Index does a lot of the hard work for me.

– Tim Humphris, Northern Victoria

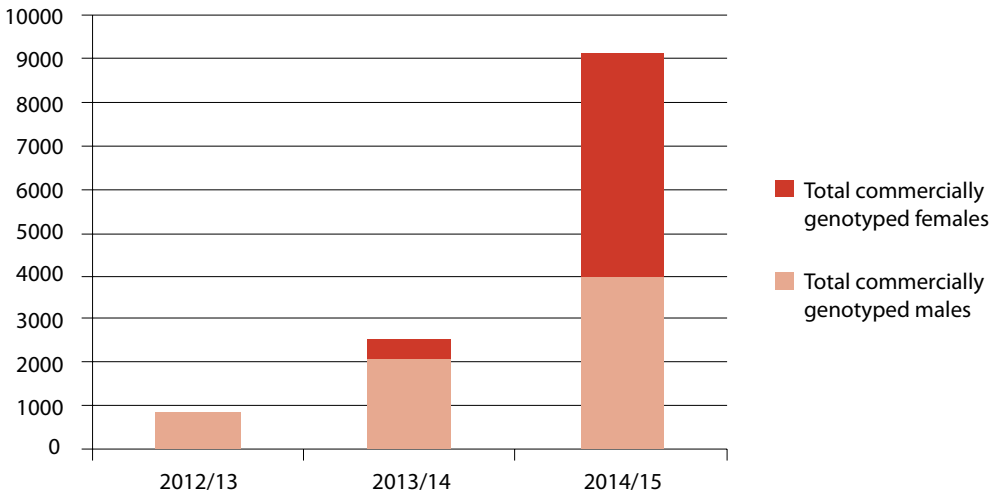


Figure 1: Cumulative total males and females genotyped commercially in Australia 2012/13 – 2014/15.

To support the above initiatives and major developments ADHIS has also invested significantly in the 'engine room'. While the three new indices and the Feed Saved ABV have received most public attention, other improvements have included the new, Residual Survival ABV, new type expression, the move to a test day model, improved blending of information from genomic and overseas sources in ABVs and on-going work in re-writing the software (GESII) that underpins the current ADHIS genetic evaluation system.

'NASIS registrations for large groups of bulls is now quick and painless as a result of streamlined ADHIS processes. ADHIS listened to their customers and revamped their services to better meet our needs.

– Bruce Ronalds,
Business Operations Manager, ABS Australia

The future for Genetic Evaluation and Herd Improvement

Over the past year ADHIS has worked alongside Dairy Australia, Australian Dairy Farmers (ADF), NHIA and other herd improvement stakeholders to progress discussions around the future of genetic/herd improvement. A key outcome from these discussions is the proposal to establish a new herd improvement industry organisation. This exciting opportunity is aimed at maximising benefits to farmers from all investments and developments across herd improvement as a whole effectively becoming a 'Centre of Excellence' for the Australian Dairy Industry. In the coming year ADHIS looks forward to progressing this initiative and establishing a strong collective vision to drive farmer profits from improving the quality and management of their herds. I encourage you to keep an eye on these developments during 2016.

R&D activity summary

ADHIS continues to invest in a range of research, development, extension, education and communication activities. Figure 2 highlights the impact of several 2015 developments.

Figure 2: Highlights of ADHIS activities in 2015.		
Development	**Activity**	**Impact**
Australia's three new breeding indices	Following the National Breeding Objective review, ADHIS introduced Australia's three new breeding indices in April 2015; Balanced Performance Index (BPI), Health Weighted Index (HWI) and Type Weighted Index (TWI). The indices are backed by strong science and in line with farmer preferences.	Three new indices aligned to farmer preferences means farmers now have more choice when selecting bulls for their herd.
Feed Saved ABV	A world-first Feed Saved ABV was introduced in April 2015 following more than 8 years of dedicated research.	Farmers can now breed cows that produce the same amount of milk using less feed.
Residual Survival ABV	A new ABV for Residual Survival replaced the Survival ABV in the new indices. The Residual Survival ABV aims to estimate the benefit of factors for which we do not currently have an ABV	All the factors that contribute to survival are appropriately weighted in Australia's three indices.
Good Bulls Guide	A new look Good Bulls Guide was published and distributed in April and August 2015. The Good Bulls Guide provides data on bulls that are above average for profit (BPI), regardless of the country or company they come from.	Farmers can build their herds with confidence by selecting bulls from the Good Bulls Guide.
Genetic Progress Reports	Genetic Progress Reports were updated to include the Balanced Performance Index and mailed out to all farmers in August 2015.	The Genetic Progress Report lets farmers benchmark their herd against the average and top 10% and track their progress for profit and six key traits.
Web updates	Improvements have been made to the search capabilities of the Displayabull tool on the ADHIS website.	Farmers and advisers have a better user experience when using Displayabull.
Herd Improvement Industry Strategic Steering Group	ADHIS is collaborating in many industry initiatives initiated by HIISSG; including the Good Bulls App, Improving Herds and MIR Profit projects.	The collaborative actions of HIISSG aim to drive improved farmer profit through the use of highly valued herd improvement services.
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 Dairy Futures CRC and other industry partners to see the continued building of Australia's genomic phenotype reference population.	Increasing the reliability of genomic breeding values means more confidence when selecting young bulls.
Genetic Evaluation System II	ADHIS is conducting a major genetic evaluation software upgrade.	ADHIS services will be more flexible and able to respond to new developments when new software commissioned in about two years.
Type expression	Standardisation of type traits was introduced from April 2015.	Standardising type traits makes it easier for farmers to assess how good an animal is for a trait.
GMACE (Genomic multi-across-country-evaluation)	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.
Test day model	A new model for interpreting production herd test records was implemented for Ayrshire, Brown Swiss, Guernsey, Illawarra and Aussie Red Breeds and will be implemented for Holstein and Jersey breeds.	This new model improves the reliability of production trait ABVs for all breeds. It has also facilitated a greater sharing of international information for the Brown Swiss Breed.
Brown Swiss production ABV(i)s	After successfully completing Interbull testing, ADHIS began publishing Brown Swiss production ABV(i)s in April 2015.	Farmers who seek to use Brown Swiss bulls now have more information to make sound bull choices.
Improved blending of ABVs	New methodology to combine information from many sources was implemented in late 2015.	Bull companies and farmers using genotyping services will notice improved consistency between private and public ABV releases.
Genotyping	ADHIS has been working with Holstein Australia and Zoetis to improve services and reports.	Reports that are easier to use increase the value of genotyping for farmers.

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

John Harlock (Chairman), Adrian Drury (retired Nov 2015), Lyndon Cleggett, Daryl Hoey, Matthew Shaffer, James Neal, Ian Cobbledick, Daniel Abernethy (General Manager and Secretary).

ADHIS staff

Daniel Abernethy, ADHIS General 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

Operations

Glen Barrett, Operations Manager

Cameron Donnelly, Programmer

Duncan Robertson, GESII System Admin

Simon Jenkins, GESII Project Manager

Sundeep Shetty, GESII Business Analyst

Education and Extension

Michelle Axford, Extension Manager

Peter Williams, Extension Officer

Sarah Saxton, Extension Officer

Lee-Ann Monks, Communications Specialist

Jodie Olden, Project Assistant

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 2015 ADHIS hosted a number of industry technical meetings and participated in the HIISSG overall strategy including the genomic pipeline working group, and the genetics 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 (DEDJTR), Assoc Prof Ben Hayes (DEDJTR), Dr Kevin Beard (ADHIS Consultant), Dr Gert Nieuwhof (ADHIS), Dr Kon Konstantinov (ADHIS), Daniel Abernethy (ADHIS) with support from Dr Jennie Pryce (DEDJTR).

Type Evaluation Steering Committee

A Type Steering Committee was established to recommend improvements to the evaluation and communication of linear type ABVs. This group has met throughout 2015 to analyse the results of a number of type related investigations. This is an important and ongoing area of work.

Members

Graeme Gillan (Chair of Type Evaluation Steering Committee and Holstein Australia), Scott Joynson (Jersey Australia), Dr Jennie Pryce (DEDJTR), Mekonnen Haile-Mariam (DEDJTR), Daryl Hoey (ADHIS Board and farmer), Christian Hickey (National Herd Development), Matthew Shaffer (Dairy Australia), Michelle Axford (ADHIS), Peter Williams (ADHIS), Bruce Ronalds (ABS Australia), Peter Thurn (Genetics Australia), Rohan Butler (Holstein Australia), Daniel Abernethy (ADHIS), Gert Nieuwhof (ADHIS).

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), John Stevenson (Dairy Express), Peter Nish (Tasherd), Frank Treasure (Farmwest), David Parkinson (AUSherd), Dr Gert Nieuwhof (ADHIS), Paul Koh (ADHIS), Daniel Abernethy (ADHIS).

InCalf report 2015

Dr Richard Shephard
InCalf Project Leader
03 5147 0307
richard@herdhealth.com.au

The latest ADHIS data shows that the slow decline in herd reproductive performance over the past few decades seems to have plateaued – if not reversed – in recent years. We now have the essential genetic tool for improving herd fertility – the Daughter Fertility ABV. This allows farmers to choose high-fertility bulls that also meet their other breeding objectives. If above-average daughter fertility bulls are used, the reproductive performance of the herd will improve over time. But, while this improvement is permanent and additive it will take many years for national fertility to reach the industry goal: a median 6-week in-calf rate of 60% by 2020. This means that farmers also need to focus on the other 'environmental' drivers of fertility.

The importance of good calf and heifer management cannot be overstated. A growing body of research on calf health and nutrition (pre-weaning and post-weaning) points to significant lifetime gains that can be achieved through better management of young stock. Young stock earn no income until they calve and lactate. Good rearing practices help ensure that heifers reach their target weight in time for mating and allows them with the best chance to get in calf early. Heifers that calve early in the calving period have longer recovery times before being mated again and have an increased likelihood of becoming pregnant and recalving early in the next year. We will soon have the findings from a PhD research project that shows the impact of colostrum management and other pre-weaning events on subsequent heifer performance and milk production in south-west Victoria.

The management of cows during the transition period also has profound and long-term impacts on cow health, production and reproduction. Cows that make good transitions into the new lactation are more likely to cycle, have fertile heats and become pregnant early in the mating period – and have higher production. To encourage farmers to focus more on how to manage cows over their transition period, Dairy Australia has developed the Low Stress Calving farmer discussion group module. This two-hour informal session will be made available to farmer discussion groups in all dairy regions in the year ahead, supported by the more technical Transition Cow Management farmer workshops.

The InCalf project has been working closely with ADHIS to promote the importance of the new genetic tools to InCalf advisers and vets as part of their approach to improving herd reproductive performance. The 40+ Repro Right advisers trained under the InCalf project over the past two years are becoming a valuable resource to the industry. These advisers work mainly within veterinary practices, artificial breeding companies and herd consultancy businesses in all our dairy regions. They have completed 10 months of study on dairy reproduction to equip them to work one-on-one with farmers on herd fertility issues. Go to www.dairyaustralia.com.au/reproright for more information about these highly skilled advisers and services they offer.

Dairy Australia held the second InCalf Reproduction Symposium in October for advisers, service providers and leading farmers. The program presented by both international and local herd fertility experts had a strong emphasis on genetics, featuring two sessions by Dr Donagh Berry from Teagasc, Ireland, that demonstrated the power of genetics and better herd data recording to improve reproductive performance across the industry.

The key to success is to select and use good genetics but don't stop there. The InCalf project aims to help farmers to optimise genetic improvements in their herds through consistent application of sound management practices.

Countdown Update

Dairy Australia
Countdown Downunder
Your Levy at Work

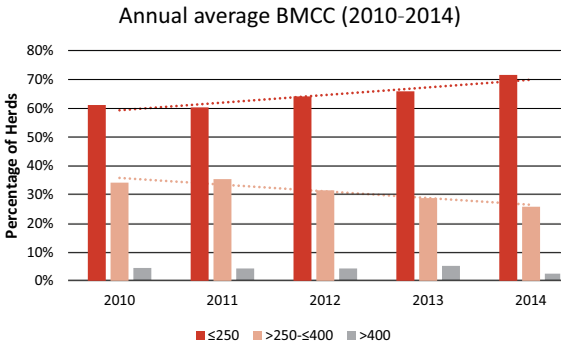
Dairy Australia's Countdown project aims to improve profitability for dairy farmers and the industry through improved milk quality. The program promotes better udder health, milk quality and farm profitability through access to Countdown resources for both farmers and advisers.

Countdown Metrics

Like many aspects of the dairy business, there is a great ability to use current data to inform decision making. With milk quality, daily BMCC data facilitates regular feedback on udder health to managers. Through great efforts of the original Countdown team, the sharing of BMCC data for the Milk Quality Awards, from all processors has allowed the recognition of herds that have achieved outstanding sustained milk quality. Celebrating success and the exploration of reasons behind it has been another way to share the broad range of controls necessary for excellent milk quality. This data set has also allowed monitoring of national trends since its inception in 2000. Figure 1 shows the steady increase in the percentage of herds with an annual BMCC less than 250 000 cells/mL. National BMCC Results – 2014

National BMCC Results – 2014

Figure 3: Milk Quality trends over the past 5 years.



Countdown Symposium October 2015

Dairy Australia's Countdown team organised a scientific Symposium in Melbourne in October. The symposium was designed to share the most recent research and technologies into milk quality with practicing dairy advisers providing milk quality advice to dairy farmers. One of the speakers, Dr. Donagh Berry from Ireland spoke on "Genetic selection for improved milk quality".

Dr Berry built a convincing argument for the potential of genetics to improve milk quality, saying that there was lots of exploitable genetic variation for milk quality, milking speed and milk components to meet future demand for dairy products.

> *Genetic improvement programs require access to large quantities of data on individual animals to aid in differentiating between animals differing in genetic merit.*
>
> – Donagh Berry

Although the industry has very good information on sub-clinical information (through individual somatic cell count testing), individual health data and in particular, clinical mastitis data, is lacking at present which reduces the potential for genetic improvement. Improved integration of health data generated on farm with the ADHIS database is required to maximise improvements in milk quality performance.

National Breeding Objectives

In the 2014 ADHIS review of the national breeding objectives, mastitis was identified as a top priority trait. Given this, it is great to observe a bigger weighting on mastitis resistance in the indices, facilitating improved genetic progress with milk quality.

Our small Countdown team is constantly reminded of the benefits of different professional groups combining to support improved milk quality on Australian dairy farms. Although there are always new developments in mastitis control, Countdown strives to use their resources, courses and webinars to promote consistent messaging to benefit hard working factory field staff, milking machine technicians, veterinarians and most of all, farmers.

Mark Humphris
Project Leader
Countdown Downunder
0428 561 440
mark@themilkroad.com.au

Dairy Futures CRC Report

Dr David Nation, CEO, Dairy Futures CRC

Dairy Futures CRC has a diverse range of research projects underway, some aiming to improve specific traits of high economic value and others aiming to boost the overall reliability of genomic selection. An important focus during 2015 has been the launch of ADHIS' new breeding indices, which use genomic information in the evaluation of all animals and include traits that incorporate our technology.

As we approach the end of our funding under the Commonwealth Government's Cooperative Research Centre Program (in June 2016), we have a diverse range of innovation projects coming to fruition. Two projects already delivering benefits to farmers are outlined below.

New Feed Saved ABV

The new Feed Saved ABV, published for the first time in April 2015, is the outcome of eight years research and development. It allows farmers to identify bulls that can save at least 100kg of dry matter per cow per year while maintaining milk production at the same level.

Our researchers were among the first in the world to devise a way in which measured feed efficiency can be used for a breeding value that incorporates real feed intake data as well as a prediction of feed required for maintenance purposes. This extra data makes the trait more relevant.

The Balanced Performance Index, Health Weighted Index and Type Weighed Index all include Feed Saved, so farmers who choose elite bulls will be breeding for feed efficiency.

More reliable fertility ABVs

The current multi-trait model used in calculations for fertility ABVs was introduced in 2013 as a result of a joint ADHIS-CRC project. Since then, the fertility project has substantially increased the amount of fertility data used in genetic evaluations by capturing data from farm and vet software that did not previously download to the national database. We have also been working together to inject data from 100 dairy herds into the national database (the Ginfo project).

The goal of all this work has been to improve the reliability of fertility ABVs, enabling farmers to more effectively breed for this trait. Our evaluation shows that, for bulls with fewer than 50 Australian daughters, fertility ABV reliability increased by 19 per cent between April 2012 (just before the introduction of the multi-trait model) and April 2015. Over the same period, the number of very high (at least 109) Fertility ABV bulls almost doubled, from 1.9% to 3.5% of Australian proven bulls. The three new breeding indices all include this improved fertility trait.

For more information about these and other Dairy Futures CRC projects, visit our website: 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	1,854	292,645	126,876	419,521	226.3	6,826	4.1	278	3.4	230	322
New South Wales	389	78,240	23,130	101,370	260.6	7,604	3.9	294	3.2	247	336
Queensland	171	18,639	8,994	27,633	161.6	5,961	4.0	238	3.3	195	332
South Australia	193	38,323	6,949	45,272	234.6	7,533	3.8	286	3.3	245	336
Tasmania	165	40,120	17,921	58,041	351.8	6,444	4.0	257	3.4	221	296
Western Australia	108	25,615	3,085	28,700	265.7	7,563	3.8	286	3.2	240	344
Australia	2,880	493,582	186,955	680,537	236.3	6,979	4.0	278	3.3	232	324
Victorian regions											
Northern	705	106,309	43,373	149,682	212.3	7,278	4	291	3.4	245	332
Eastern	673	107,310	47,872	155,182	230.6	6,445	4.1	266	3.4	217	316
Western	476	79,026	35,631	114,657	240.9	6,736	4.1	277	3.4	226	315

Table 1a : National Totals and Production Averages 1999 to 2015.

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
2014/2015	2,880	493,582	186,955	680,537	236.3	6,979	4.0	278	3.3	232	324

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	1,854	39	40	54	95	147	216	293	344	224	166
New South Wales	389	10	4	9	22	26	47	67	73	54	43
Queensland	171	15	8	11	19	22	23	16	13	7	12
South Australia	193	0	2	6	8	13	18	42	36	31	28
Tasmania	165	2	4	6	18	19	30	25	26	11	9
Western Australia	108	1	0	3	0	7	11	15	27	19	21
Australia	2,880	67	58	89	162	234	345	458	519	346	279
Victorian regions											
Northern	705	8	11	14	26	39	68	110	146	105	99
Eastern	673	14	16	17	45	70	95	118	125	61	27
Western	476	17	13	23	24	38	53	65	73	58	40

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	1,854	43	42	98	162	236	319	331	208	124	55
New South Wales	389	9	7	18	25	50	65	80	57	24	20
Queensland	171	14	10	17	18	31	23	18	8	3	4
South Australia	193	0	2	6	15	23	35	40	28	22	13
Tasmania	165	1	6	10	25	27	26	28	9	9	9
Western Australia	108	1	1	2	3	8	24	23	28	12	2
Australia	2,880	68	68	151	248	375	492	520	338	194	103
Victorian regions											
Northern	705	7	12	25	45	63	122	133	112	70	37
Eastern	673	17	15	43	77	107	125	123	50	23	8
Western	476	19	15	30	40	66	72	75	46	31	10

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	91,027	6,166	3.95	244	3.34	206	329
3 Year Old	87,329	6,860	3.96	272	3.36	230	327
Mature Cow	315,226	7,246	4.00	290	3.32	240	322
Total	493,582	6,979	3.99	278	3.33	232	324

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	91,027	249	232	211	194
3 Year Old	87,329	281	255	240	214
Mature Cow	315,226	306	270	254	223
Total	493,582	289	262	242	217

Trends in the production of herd recorded cows

The milk solid yields of herd recorded cows have increased by almost 100 kg/cow/year since 1999. After two years of decline in average milk solid yields, herd recorded cows have increased by 9kg milk solids/cow/year (2%) compared to 2014.

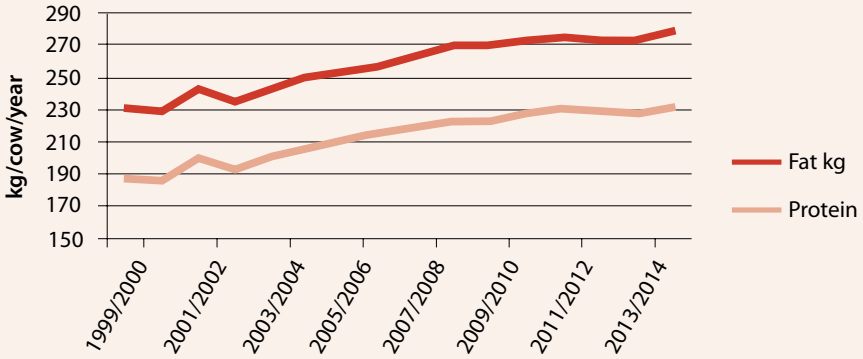


Figure 4: Trend in fat and protein yields in herd recorded cows 1999-2015.

Where's the bull?

At $6/kg MS, the difference in production between progeny of AI and Natural sires is worth an impressive $312 in extra milk solids per cow per year. AI sires have higher genetic merit and are more profitable because they have been selected for production but also because of their benefits in delivering other economically important traits like longevity, fertility, type, health, feed saved and workability characteristics. Not only do the daughters of higher genetic merit sires produce well, they are just as likely (if not more likely) to last in the herd compared to daughters of lower genetic merit sires in Australia's wide range of feeding systems (Feeding the Genes, 2013).

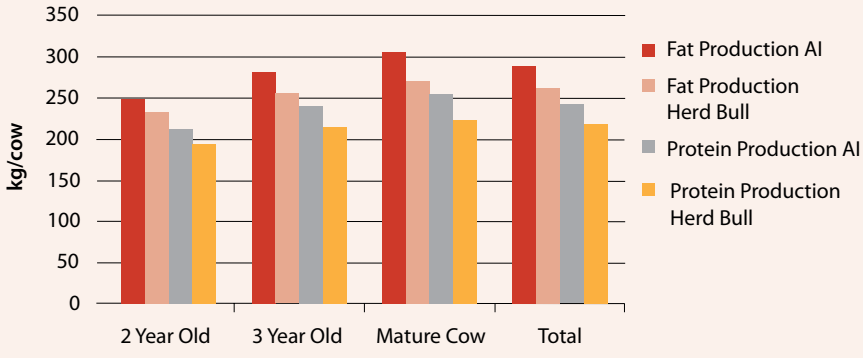


Figure 5: Fat and Protein production per cow bred by AI and Natural bull.

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	534	6,038	244	203
10-19	142	6,601	262	219
20-29	143	6,643	264	220
30-39	157	6,414	259	214
40-49	202	6,974	275	230
50-59	251	7,207	288	240
60-69	291	7,053	280	233
70-79	351	7,419	294	245
80-89	342	7,202	288	241
> 89	467	7,385	293	246
Total	2,880	6,979	278	232

Table 7: Production averages by breed.							
Breed	Number of cows	Production averages					
		Milk litres	Fat %	Fat kg	Protein %	Protein kg	Lactation length days
Holstein	315,574	7,494	3.85	288	3.26	244	331
Jersey	55,633	5,381	4.80	258	3.67	198	313
Holstein/Jersey Cross	23,567	6,371	4.40	280	3.51	224	311
Guernsey	1,379	5,645	4.31	243	3.37	190	330
Ayrshire	3,085	5,704	4.18	239	3.40	194	313
Dairy Shorthorn	376	5,338	3.88	207	3.29	175	301
Illawarra	4,901	6,540	3.97	260	3.28	214	321
Unknown Breed	71,277	6,430	4.00	257	3.36	216	315
Simmental	76	6,534	4.05	265	3.35	219	326
Red Poll	49	3,576	5.31	190	3.73	134	300
Meuse-Rhine-Issel	66	5,489	4.11	226	3.48	191	308
Aust Milking Zebu	7	6,193	3.66	227	3.21	199	330
Commercial Dairy	2	7,288	3.97	290	3.20	233	340
Aust Red Breed	13,958	6,361	4.16	265	3.43	218	311
Brown Swiss	3,614	6,217	4.07	253	3.45	214	325
Aust Friesian Sahiwal	18	7,442	4.07	303	3.30	245	325
Total	493,582	6,979	3.99	278	3.33	232	324

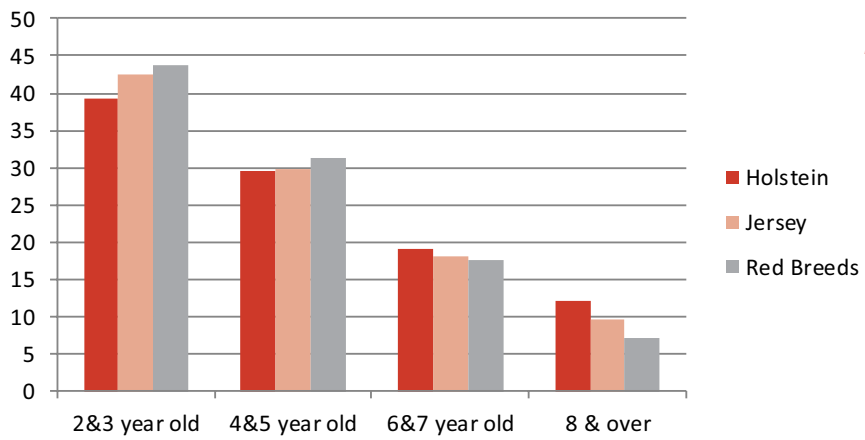


Figure 6: Age distribution of herd recorded cows by breed (at most recent calving).

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	15,992	3.2	7,109	3.87	275	3.26	232	344
February	28,046	5.7	7,403	3.87	287	3.29	244	342
March	51,666	10.5	7,347	3.93	289	3.34	245	337
April	51,994	10.5	7,228	3.95	286	3.34	242	332
May	43,526	8.8	7,118	3.97	282	3.33	237	327
June	36,198	7.3	6,922	4.01	277	3.33	231	320
July	47,492	9.6	6,762	4.06	274	3.35	227	316
August	88,527	17.9	6,772	4.08	276	3.37	228	309
September	69,457	14.1	6,769	4.02	272	3.32	225	318
October	33,109	6.7	6,814	3.97	270	3.27	223	326
November	15,816	3.2	6,857	3.92	269	3.24	222	335
December	11,759	2.4	7,025	3.87	272	3.22	226	344
Australia	493,582	100	6,979	3.99	278	3.33	232	324

Trends in the calving pattern of herd recorded cows

Over the past 15 years, the proportion of cows calved between July and September has dropped by more than 10%. The proportion of cows calved in March and April has almost doubled. Having the right calving pattern is an important contributor to profit and is influenced by many factors, including milk pricing, feeding systems and cow fertility.

Figure 7: Distribution of calvings by month.

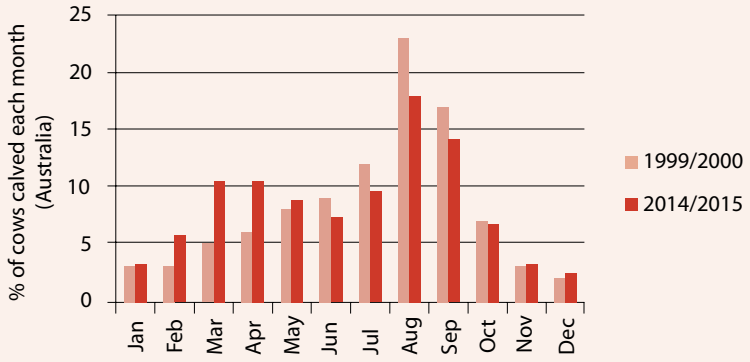
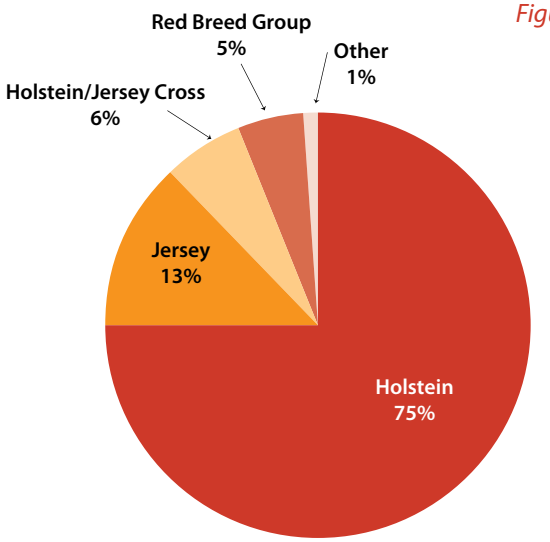


Figure 8: Distribution of breeds.



Trends in herd recording

The proportion of herds tested is close to 50% and has been stable in recent years. However, the proportion of cows tested continues to steadily decline. The decline in herds is greatest in New South Wales and Queensland where the total number of herds has similarly declined.

Interestingly, there has been an increase in the number of larger herds participating in herd recording and a decline in the number of smaller herds. This could be from newer herds being larger and/or existing herds increasing in size and shifting from one category to the next.

Herd recording is an important practice to drive on-farm improvements. It also has a vital role to play in ensuring the ongoing collection of high quality data used for research and in genetic evaluation, from which benefits are delivered to all Australian farmers. As such, industry has invested in projects, such as ImProving Herds and MIR Profit that support increasing herd recording participation.

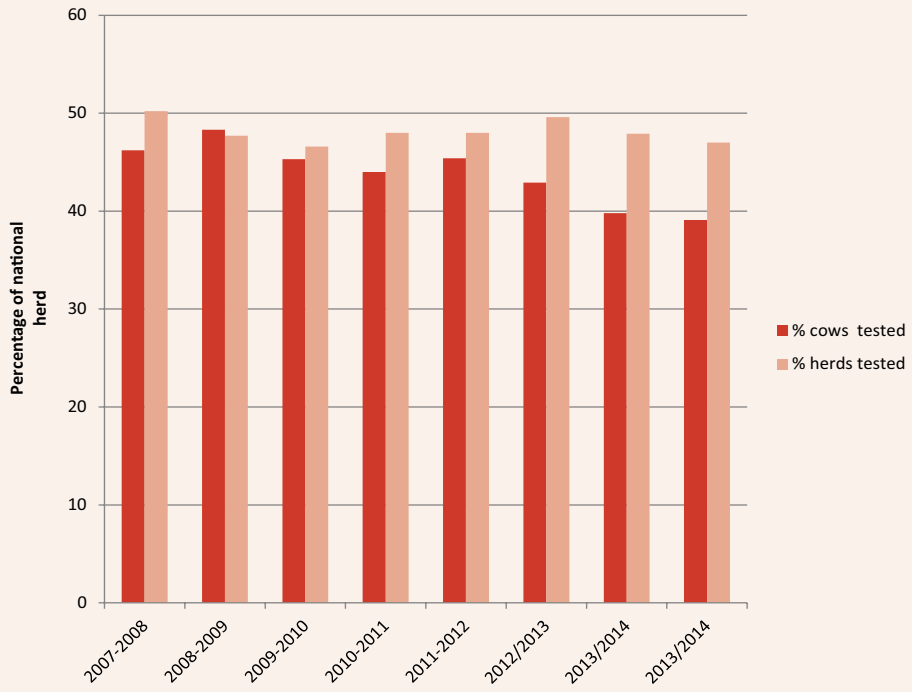


Figure 9: Australian herd recording participation 2007-2015.

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	60,331	6,573	3.78	249	3.27	215	335
	3-year-old	58,637	7,331	3.80	278	3.29	241	333
	Mature cow	196,606	7,825	3.88	303	3.25	254	328
	Total	315,574	7,494	3.85	288	3.26	244	331
	Artifically bred	219,303	7,721	3.83	296	3.26	251	333
	Naturally bred	96,271	6,975	3.89	271	3.26	228	325
	Pure bred	56,338	8,331	3.75	312	3.20	267	347
	Grade	259,236	7,312	3.87	283	3.27	239	327
Jersey	2-year-old	11,989	4,921	4.73	233	3.61	178	319
	3-year-old	10,991	5,263	4.84	255	3.69	194	314
	Mature cow	32,653	5,591	4.80	269	3.68	206	310
	Total	55,633	5,381	4.80	258	3.67	198	313
	Artifically bred	35,199	5,484	4.87	267	3.70	203	315
	Naturally bred	20,434	5,205	4.66	243	3.61	188	310
	Pure bred	13,980	5,718	4.91	281	3.71	212	327
	Grade	41,653	5,269	4.76	251	3.66	193	308
Holstein/Jersey Cross	2-year-old	4,428	5,632	4.37	246	3.47	196	316
	3-year-old	4,979	6,230	4.42	275	3.55	221	311
	Mature cow	14,160	6,652	4.40	293	3.51	234	310
	Total	23,567	6,371	4.40	280	3.51	224	311
	Artifically bred	9,136	6,548	4.42	289	3.54	232	313
	Naturally bred	14,431	6,259	4.39	275	3.50	219	311
	Pure bred	0	0	0	0	0	0	0
	Grade	23,567	6,371	4.40	280	3.51	224	311
Guernsey	2-year-old	243	4,797	4.39	211	3.36	161	324
	3-year-old	278	5,529	4.29	237	3.39	187	342
	Mature cow	858	5,922	4.30	255	3.37	199	328
	Total	1,379	5,645	4.31	243	3.37	190	330
	Artifically bred	557	5,597	4.43	248	3.39	190	334
	Naturally bred	822	5,677	4.24	241	3.36	191	328
	Pure bred	250	5,299	4.31	228	3.36	178	346
	Grade	1,129	5,721	4.31	247	3.37	193	327
Ayrshire	2-year-old	544	4,741	4.27	202	3.41	162	322
	3-year-old	547	5,549	4.17	231	3.40	189	322
	Mature cow	1,994	6,009	4.17	250	3.40	204	307
	Total	3,085	5,704	4.18	239	3.40	194	313
	Artifically bred	1,692	5,885	4.24	249	3.44	202	317
	Naturally bred	1,393	5,484	4.11	226	3.36	184	307
	Pure bred	651	5,851	4.10	240	3.35	196	328
	Grade	2,434	5,665	4.21	238	3.42	194	309

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	713	5,889	4.03	237	3.31	195	336
	3-year-old	1,126	6,137	3.94	242	3.31	203	328
	Mature cow	3,062	6,840	3.97	272	3.26	223	316
	Total	4,901	6,540	3.97	260	3.28	214	321
	Artifically bred	2,639	6,837	3.99	273	3.29	225	322
	Naturally bred	2,262	6,194	3.95	245	3.26	202	321
	Pure bred	1,665	6,853	3.88	266	3.24	222	327
	Grade	3,236	6,379	4.02	257	3.30	210	319
Unknown Breed	2-year-old	8,886	5,768	4.02	232	3.42	197	317
	3-year-old	7,093	6,513	3.99	260	3.42	223	312
	Mature cow	55,298	6,526	4.00	261	3.35	218	315
	Total	71,277	6,430	4.00	257	3.36	216	315
	Artifically bred	2,273	7,232	3.89	281	3.33	241	319
	Naturally bred	69,004	6,404	4.01	257	3.36	215	315
	Pure bred	0	0	0	0	0	0	0
	Grade	71,277	6,430	4.00	257	3.36	216	315
Aust. Red Breed	2-year-old	3,104	5,558	4.15	231	3.42	190	319
	3-year-old	2,944	6,253	4.14	259	3.47	217	312
	Mature cow	7,910	6,716	4.17	280	3.42	230	308
	Total	13,958	6,361	4.16	265	3.43	218	311
	Artifically bred	12,698	6,447	4.16	268	3.43	221	312
	Naturally bred	1,260	5,493	4.19	230	3.41	187	304
	Pure bred	1,379	7,175	3.77	270	3.38	242	322
	Grade	12,579	6,272	4.21	264	3.44	216	310
Brown Swiss	2-year-old	701	5,472	3.99	219	3.41	187	323
	3-year-old	628	5,924	4.00	237	3.45	204	328
	Mature cow	2,285	6,526	4.11	268	3.45	225	325
	Total	3,614	6,217	4.07	253	3.45	214	325
	Artifically bred	2,355	6,364	4.09	260	3.47	221	328
	Naturally bred	1,259	5,943	4.04	240	3.40	202	320
	Pure bred	1,296	6,410	4.03	258	3.50	224	346
	Grade	2,318	6,110	4.10	251	3.42	209	314
Other Breeds	2-year-old	88	5,148	3.97	204	3.34	172	305
	3-year-old	106	5,364	3.95	212	3.32	178	322
	Mature cow	400	5,528	4.05	224	3.35	185	302
	Total	594	5,443	4.05	219	3.35	182	306
	Artifically bred	251	6,171	3.95	244	3.34	206	305
	Naturally bred	343	4,910	4.08	200	3.34	164	306
	Pure bred	21	4,318	3.99	172	3.26	141	288
	Grade	573	5,484	4.02	220	3.34	183	306

Better herd analysis through recording sires

Calf records serve a variety of purposes, including establishing an animal's pedigree, which influences its breeding values and estimate of profit. For most dairy businesses, the herd is the second most valuable asset so it's worth looking after the information that contributes to that value.

The trend continues towards poorer recording of sires of calves. At a time when computerised record keeping systems make it relatively easy to store information, the proportion of herds with very good sire IDs has declined by about 5% in the past 10 years while the proportion of herds with poor sire IDs has increased similarly.

One way to make sure sire IDs aren't forgotten is to record at birth and send the information to the herd recording centre. Having calf records entered into the system from an early age means the herd's genetic progress report will show the impact of more recent breeding decisions. Having this feedback sooner means farmers can take action earlier if needed. Without calf records, the Genetic Progress Report will always be lagging for the most recent two years.

It's definitely worth making the effort to get paddock records into the herd recording system as soon as possible.

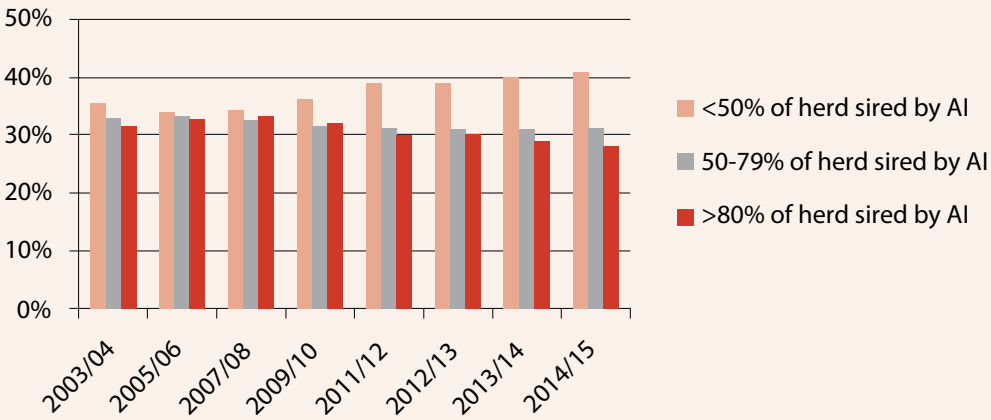


Figure 10: Percentage of herds in AI usage groups 2003-2015.

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	8	11	9	8	8	10	10	9	7	6	6
Queensland	10	9	10	9	10	9	8	8	7	6	6	7
South Australia	6	9	10	10	9	6	7	12	14	9	5	4
Tasmania	1	3	8	10	4	1	4	31	26	9	2	1
Western Australia	9	12	12	9	8	6	5	9	11	7	5	7
Australia	3	6	10	11	9	7	10	18	14	7	3	2
Victorian regions												
Northern	1	4	13	14	7	4	7	23	16	7	3	1
Eastern	1	3	9	8	6	7	16	25	16	6	1	1
Western	2	6	9	12	17	16	11	10	9	5	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	56,338	8,331	3.75	312	3.20	267	347
Jersey	13,980	5,718	4.91	281	3.71	212	327
Guernsey	250	5,299	4.31	228	3.36	178	346
Ayrshire	651	5,851	4.10	240	3.35	196	328
Illawarra	1,665	6,853	3.88	266	3.24	222	327
Aust Red Breed	1,379	7,175	3.77	270	3.38	242	322
Brown Swiss	1,296	6,410	4.03	258	3.50	224	346
Total	75,559	7,730	3.98	303	3.31	254	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	46,428	8,411	3.74	315	3.20	269	348
Jersey	11,107	5,787	4.91	284	3.71	215	327
Guernsey	117	5,353	4.30	230	3.30	177	355
Ayrshire	381	5,958	4.08	243	3.33	198	333
Illawarra	968	7,074	3.89	276	3.25	230	329
Aust Red Breed	1,336	7,206	3.76	271	3.37	243	322
Brown Swiss	938	6,471	4.03	261	3.51	227	348
Total	61,275	7,837	3.97	306	3.31	257	343

Table 13: Victorian production averages 1930/1931 – 2014/2015.

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
2014/2015	1,854	419,521	226	6,826	4.1	278	3.4	230

2015 Australian Breeding Values – Genetic Trends

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 advisors to question whether ABVs make a difference. ADHIS is committed to demonstrating the value of genetics and recognising those who show a commitment to breeding the country's leading dairy cow genetics. In 2015 ADHIS recognised the highest performing herds on the new Balanced Performance Index (BPI) across each dairying region. The achievements made by these herds received considerable regional media attention and lead to the inaugural DairySA highest BPI awards at the DairySA Gala dinner. Australia's top ranking Red Breeds herds are recognised at the annual Red breeds red tie gala dinner. A list of Australia's top ranking herds can be found on pages 31 and 32 of this 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.

This year also saw the inaugural highest BPI Holstein cow award presented at the Victorian Winter Fair. The winning cow, Elmar Goldwyn Jessica 4, topped the award with a BPI of 255, well above the breed average of 0. Bred and owned by the Hore family at Leitchville, Jessica 4 represented the sort of cow that many dairy farmers aspire to breed. ADHIS looks forward to continuing this award at future Victorian Winter Fairs.

Farmers continue to make effective choices in improving their herds' genetic merit as demonstrated in Figures 11-14.

Are you willing to leave profit on the table?

Younger Holstein cows (born 2012) are about $100 per year more profitable than their counterparts born at the start of the millennium. This is the result of the breeding decisions farmers and bull companies have made. This can be tracked by comparing the average genetic merit of cows for profit (Balanced Performance Index BPI) grouped by year of birth. In reality, farmers have needed to improve the profitability of every cow in their herd to maintain or increase the wedge between income and farm costs. Staying the same isn't an option.

Last year, one third of Holstein AI bulls purchased by farmers did not meet the standard of the Good Bulls Guide. The 2014 NHIA semen market survey reported 1400 Holstein AI bulls sold in Australia (excluding progeny test). Nine hundred Holstein AI bulls met the Good Bulls Guide criteria for reliability and profit. This leaves 500 bulls below the standard. The standard was $116 profit in 2014, with an average of the top 50 bulls being $267. There is scope for improved focus on bull selection.

Let's take a look at two scenarios:

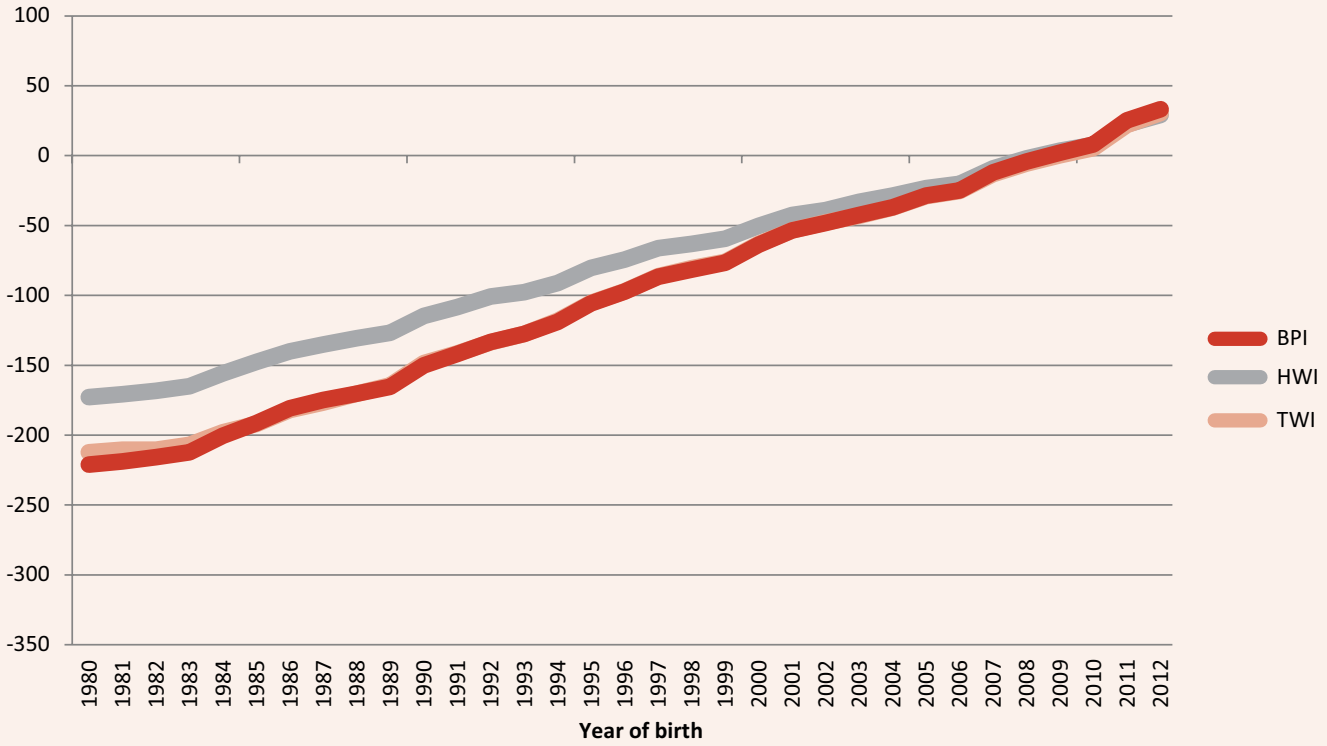
1. Maintain status quo. If we continue to select bulls as we have, is likely that cows born in 2020 will be about $100 more profitable than the average cow today.
2. Make improvements. A more focused approach to bull selection that doubles the annual gain is likely to deliver cows born in 2020 that are about $160 more profitable than the average cow today. This means choosing higher profit bulls, such as those found in the Good Bulls Guide.

If the goal is to increase profit, check that bulls used for all joinings come from the Good Bulls Guide. Accelerate gains by sticking to the highest BPI bulls that also have strengths in priority areas for an individual herd. Look for the Good Bulls App in 2016 to make this job quick and easy.

Rate of genetic gain for profit for cows born 1985-2012

	BPI
Holstein	$8.1 profit per cow per year

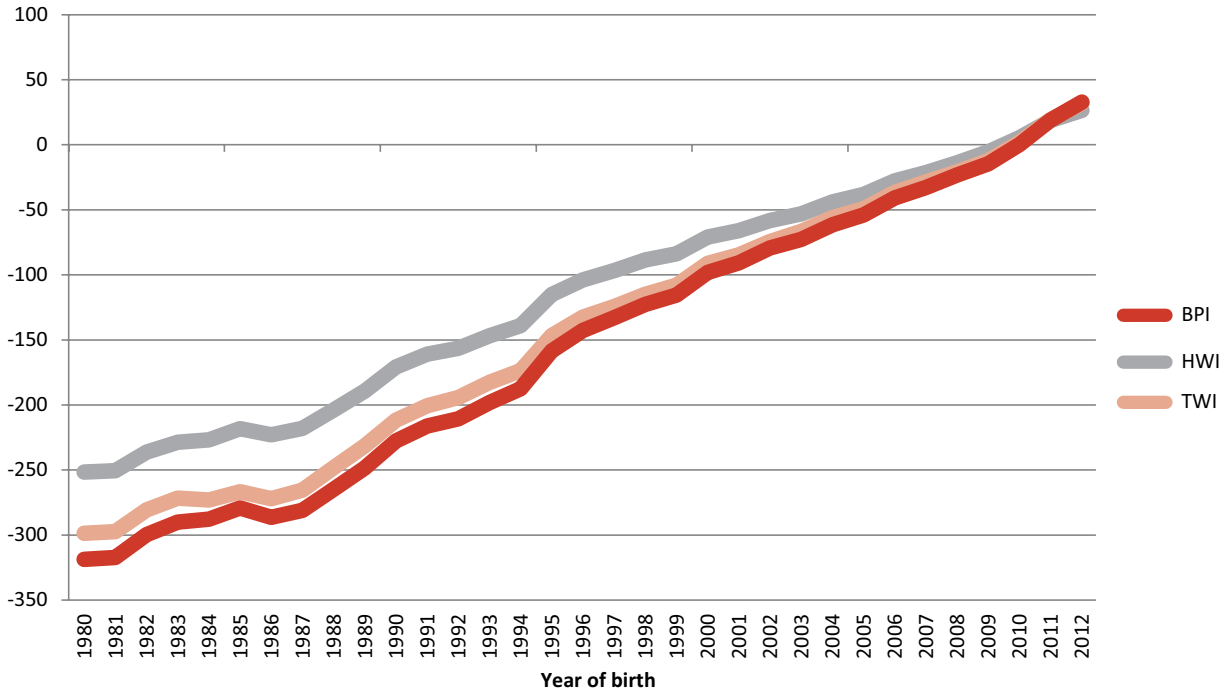
Figure 11: Genetic trend of Australian Holstein cows for profit indices. Herd recorded and sired by AI bulls.



Rate of genetic gain for profit for cows born 1985-2012

	BPI
Jersey	$11.4 profit per cow per year

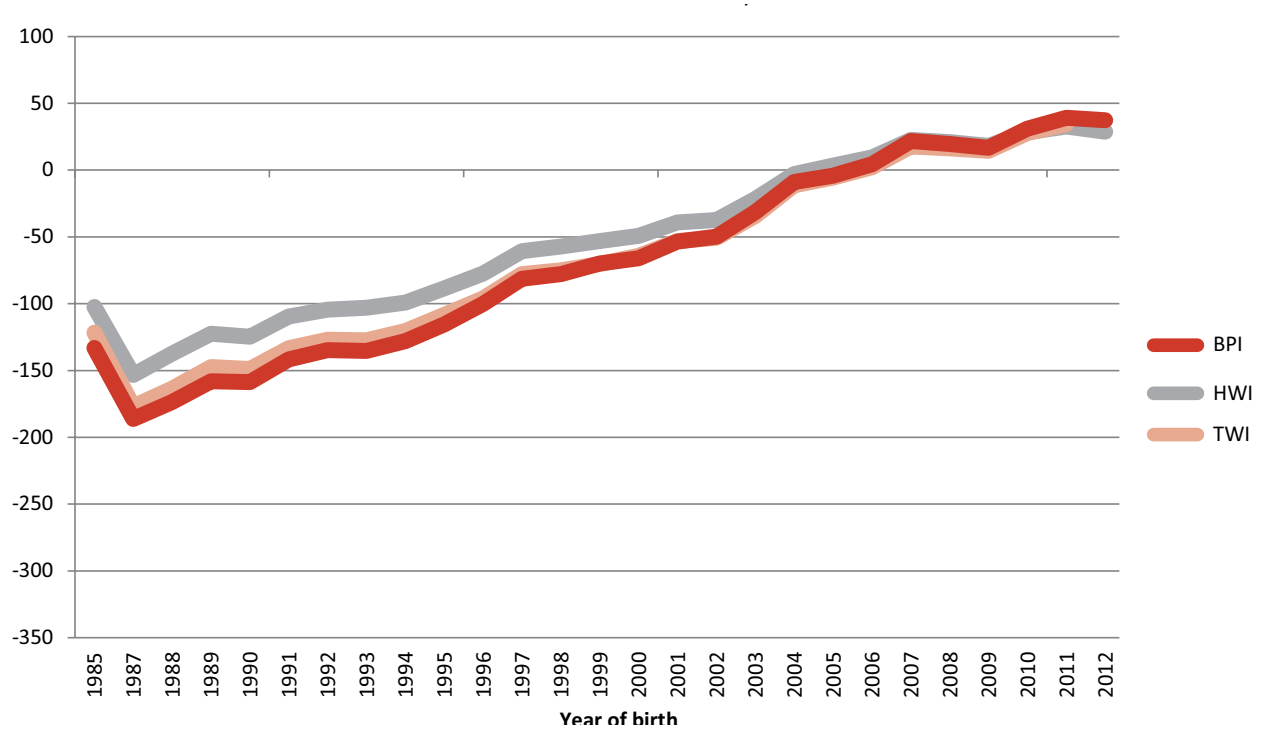
Figure 12: Genetic trend of Australian Jersey cows for profit indices. Herd recorded and sired by AI bulls.



Rate of genetic gain for profit for cows born 1985-2012

	BPI
Red Breeds	$9 profit per cow per year

Figure 13: Genetic trend of Australian Red Breed cows for profit indices. Herd recorded and sired by AI bulls.



Fertility trends improve

After two decades of decline or no improvement, the genetic trend for fertility is improving each year. The average ABV for daughter fertility of cows born in 2012 is similar to cows born in 1996 and is about 0.5% higher than cows born in 2011. Daughter fertility is expressed as % 6-week in-calf rate.

This is an example of the gains that can be made through increased emphasis of fertility in Australian indices and further gains are expected as the focus on fertility has strengthened, particularly in the Balanced Performance Index (BPI) and Health Weighted Index (HWI). Furthermore, bull companies and farmers are paying extra attention to the Daughter Fertility ABV when choosing their final bull selections.

The value of an increased rate of gain for daughter fertility can be directly applied at farm level. In 2015, John Morton analysed the relationship between the reproductive performance of cows and their Daughter Fertility ABV. The 6-week in-calf rate of cows with an ABV of 102 was 9% higher than cows with an ABV of 97 (Morton unpublished).

The work of the Dairy Futures CRC and ADHIS has significantly improved the reliability of the Daughter Fertility ABV by 18% for bulls with less than 50 daughters between 2012 and 2015 (Pryce, 2015). This research has also increased the standard deviation of the trait 3.6 to 4.47 (2012 to 2015), which means there are more bulls with much higher fertility ABVs to choose from. For example, in August 2015, half of the top 20 BPI bulls had a Daughter Fertility ABV of at least 105.

The simplest way to improve the genetics of herds for fertility is to choose bulls from the Good Bulls Guide with a higher Daughter Fertility ABV.

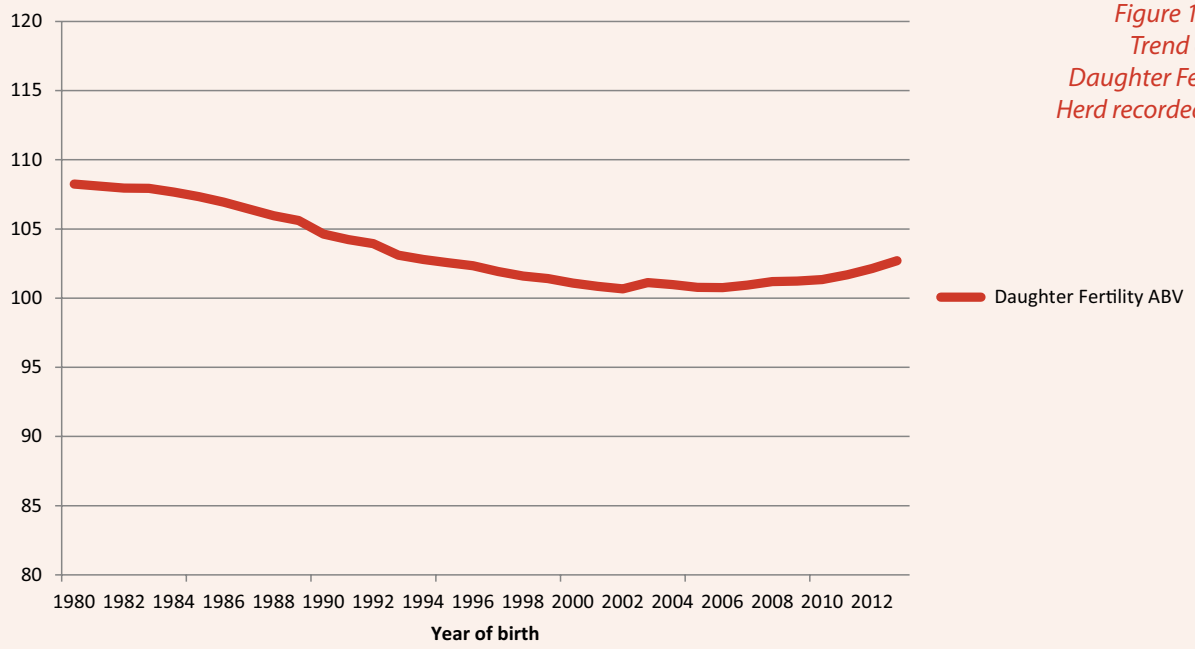


Figure 14: Genetic Trend of Holstein Daughter Fertility ABV. Herd recorded and sired by AI bulls.

2015 Australian Breeding Values – Good Bulls Guide

THE Good Bulls GUIDE

August 2015

Holstein Profit – Proven Australia
Balanced Performance Index (BPI)

PROFIT RANK	BULL ID	BULL NAME	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	INDICES				PRODUCTION				TYPE			FERTILITY		SOURCE
					BPI ($)	RELIABILITY	HWI	TWI	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	
1	**CHRISTMAS**	EMU BANKS CHRISTMAS-ET	g	A	**315**	79	206	319	251	88	99	31	107	100	81	100	74	GAC
2	**GOLDCREST**	TOPSPEED GOLDYN-ET	g	A	**312**	74	255	287	221	84	63	30	101	102	72	99	70	GAC
3	**NIELS**	HILL VALLEY NIELS	g	A	**311**	72	258	325	161	84	62	31	105	104	63	103	65	ABS
4	**CANBEE**	COUNTRY ROAD ROUMARE CANBEE	g	A	**295**	82	205	308	255	92	187	60	106	103	85	93	74	ALT
5	**SHOLTZ**	ST. CLAIR SHOLTZ-TWIN	g	A	**257**	74	178	258	191	84	54	30	104	103	72	99	73	ABS
6	**DELSANTO**	MANNA FARM DEL SANTO	g	A	**254**	91	181	277	236	99	1384	222	107	110	95	95	90	GAC
7	**29H012772**	BALLYCAIRN OMAN PELLO	g	A	**250**	79	200	197	134	87	59	27	99	97	80	111	76	ABS
8	**ROUFECTOR**	BUNDALONG ROUFECTOR	g	A	**248**	78	165	274	220	88	87	36	109	106	77	95	74	ALT
9	**7H8081**	ENSENADA TABOO PLANET ET	g	A	**246**	92	215	258	94	99	661	133	104	110	97	101	95	GAC
10	**WESTGATE**	GALLRAE JOCKO 3438	g	A	**245**	81	202	257	139	90	102	49	109	106	78	100	78	GAC
11	**JANEK**	RENGAW JARDIN JANEK	g	A	**238**	74	183	222	192	85	85	24	104	105	70	103	64	ABS
12	**29H012470**	INDIJKS BABYLON	g	A	**236**	88	164	198	165	97	415	96	102	99	88	111	86	ABS
13	**GONZO**	CURRAJUGLE GONZO	g	A	**236**	84	226	220	65	95	268	80	100	105	84	112	80	ABS
14	**USEAGE**	KAARMONA CALEB	g	A	**235**	85	198	233	156	94	232	66	103	109	85	100	83	GAC
15	**FLASHBACK**	CARENDA FLASHBACK	g	A	**230**	71	184	239	140	80	53	24	106	104	75	102	64	GAC
16	**BUDDHA**	BUSHLEA PERFECTOR BOLD-ET	g	A	**229**	88	177	196	152	98	787	186	101	102	92	101	82	GAC
17	**MIDNIGHTSPEC**	HILL VALLEY MIDNIGHT SPECIAL	g	A	**228**	75	152	211	187	84	77	28	103	104	80	96	68	ABS
18	**JENKINS**	KIRK ANDREWS JENKINS	g	A	**228**	70	185	273	152	80	52	25	108	113	68	97	61	GAC
19	**KINGTIDE**	BUNDALONG PLANET KINGTIDE	g	A	**224**	70	184	161	116	79	45	25	97	103	70	100	63	GAC
20	**ALTAMOONWALK**	HILL VALLEY MOONWALK	g	A	**224**	76	203	254	90	88	104	32	103	108	69	99	68	ALT
21	**CARLANA**	KAARMONA CARLANA	g	A	**221**	71	144	202	192	80	49	27	102	104	75	100	66	GAC
22	**AJFANTOM**	ADLEJAMA REALM FANTOM	g	A	**219**	72	160	201	192	82	61	24	98	98	74	99	60	GAC
23	**MOTOWN**	ECLIPSE ROUMARE MOTOWN		A	**219**	75	163	208	161	86	81	40	101	100	74	100	62	GAC
24	**WYMAN**	PIROLO GOLDW. WYMAN	g	A	**219**	88	186	208	94	96	426	79	102	102	93	109	85	GAC
25	**REALM**	ECLIPSE ROUMARE REALM	g	A	**218**	77	144	195	225	86	73	36	97	100	73	94	74	GAC

Holstein Profit - Genomic ABV(g)s
Balanced Performance Index (BPI)

PROFIT RANK	BULL ID	BULL NAME	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	INDICES				PRODUCTION				TYPE			FERTILITY		SOURCE
					BPI ($)	RELIABILITY	HWI	TWI	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	
1	**ROYALPIC**	HINDLEE PICOLA ROYALROUMARE 1414-ET	g	A	**307**	53	239	290	218	65	0	0	103	105	41	104	38	GAC
2	**VALIUM**	CARENDA VALIUM 354	g	A	**305**	51	241	274	204	64	0	0	101	101	38	107	36	GAC
3	**JUMPON**	RENGAW KMA JUMPON	g	A	**302**	57	227	303	231	68	0	0	105	105	46	98	43	GAC
4	**VIZABULL**	CARENDA VIZABULL 375	g	A	**302**	52	213	286	203	64	0	0	103	102	39	106	37	GAC
5	**VANCE**	CARENDA PICOLA 349	g	A	**290**	53	226	281	197	65	0	0	105	104	40	104	38	GAC
6	**CRVBOUWROCKY**	BOUW ROCKY	g	A	**288**	51	235	276	147	64	0	0	104	103	38	110	36	CRV
7	**VERMOUTH**	CARENDA VERMOUTH 394	g	A	**281**	52	218	258	217	64	0	0	100	105	40	103	38	GAC
8	**REACTOR**	CARENDA REACTOR 352	g	A	**280**	55	200	288	223	67	0	0	105	107	44	100	42	GAC
9	**JUSTLE**	RENGAW MOM JUSTLE	g	A	**280**	59	228	244	151	70	0	0	102	103	50	107	46	AGR
10	**MILKMORE**	COUNTRY ROAD PICOLA MILLSY-ET	g	A	**277**	54	226	275	193	66	0	0	105	105	41	104	39	GAC
11	**PLANEJACK**	OURWAY PLANE JACK	g	A	**275**	61	230	264	115	72	0	0	102	104	51	105	48	GAC
12	**ROYALBEE**	HINDLEE CANBEE ROYAL 14 6-ET	g	A	**272**	56	200	270	184	68	0	0	104	102	46	103	41	GAC
13	**PICOLA**	ADLEJAMA DELSANTO PICOLA	g	A	**271**	60	206	270	192	71	0	0	104	107	49	102	47	GAC
14	**FOLKLAW**	CARENDA FOLKLAW 339	g	A	**270**	59	207	254	193	71	0	0	102	103	49	98	44	GAC
15	**NARDOO**	HILL VALLEY SS NARDOO	g	A	**270**	52	223	274	139	65	0	0	104	105	39	102	37	GAC
16	**PETRIE**	INGOLMORE MCCORMICK PETRIE	g	A	**269**	63	212	231	175	76	17	8	101	100	51	109	49	ABS
17	**ROYALMAN**	HINDLEE GOLDWYN OMANROYAL 121003	g	A	**269**	62	224	263	140	73	0	0	104	105	56	108	52	GAC
18	**GOLDWARRIOR**	BUNDALONG LIQUIDGOLD WARRIOR	g	A	**267**	51	200	237	158	64	0	0	102	101	39	108	37	GAC
19	**THETOP**	ADLEJAMA ATLEY PINNACLE-ET	g	A	**265**	52	206	286	152	64	0	0	108	109	40	101	38	GAC
20	**JUDGEMENT**	RENGAW ESQUIRE JUDGEMENT	g	A	**264**	56	213	212	150	68	0	0	101	100	43	110	44	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**

2015 Australian Breeding Values – Good Bulls Guide

THE Good Bulls GUIDE

August 2015

Jersey Profit - Proven Australia
Balanced Performance Index (BPI)

					INDICES				PRODUCTION				TYPE			FERTILITY		
PROFIT RANK	BULL ID	BULL NAME	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	BPI ($)	RELIABILITY	HWI	TWI	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	SOURCE
1	**0200JE08165**	BROADLIN HATMAN	g	A	**356**	65	251	379	290	78	42	21	109	111	62			SEM
2	**RACEWAY**	ABERDEEN VALERIAN SANDOWN-ET	g	A	**339**	80	260	344	222	90	114	44	107	112	82	101	75	GAC
3	**CAIRNBONE**	CAIRNBRAE TBONE ENSIGN	g	A	**326**	72	249	392	203	83	61	22	113	120	69	102	64	ALT
4	**CSCAMBITION**	RIVERSIDE AMBITION	g	A	**324**	74	276	306	197	84	64	26	104	108	70	102	68	ABS
5	**VIPOR**	NOWELL VIPER	g	A	**316**	71	268	324	186	81	51	20	104	112	69	101	70	AGR
6	**ELTON**	CAIRNBRAE JACES ELTON	g	A	**314**	92	222	332	218	99	3814	428	108	107	96	101	97	ABS
7	**NAVARIAN**	COLNARCO NAVARIAN	g	A	**313**	74	240	311	221	85	76	34	105	108	65	102	68	GAC
8	**CSCEDISON**	CAIRNBRAE TBONE EDISON	g	A	**299**	73	168	302	280	84	75	33	103	104	73	98	63	ABS
9	**BOSGREGSTAR**	WHITE STAR GREG	g	A	**280**	77	178	198	251	89	140	46	98	94	74	104	63	CRV
10	**MAXAPPEAL**	RIVERSIDE MAXIMUM APPEAL	g	A	**262**	75	202	294	156	87	63	27	107	105	70	101	73	ABS
11	**ROUNDHILL**	ABERDEEN VALERIAN ROUNDHILL-ET	g	A	**245**	74	194	235	147	84	72	32	105	105	68	104	72	GAC
12	**BROADSIDE**	BROADLIN 2420 SPIRITUAL	g	A	**243**	74	198	238	158	84	62	37	103	105	74	102	66	GAC
13	**VASILIS**	KAARMONA VASILIS	g	A	**233**	73	176	226	148	84	65	22	102	100	62	99	68	AGR
14	**LARFALOT**	LIGHTWOOD LUCRATIVE	g	A	**232**	92	158	261	164	99	2174	306	107	104	96	98	97	GAC
15	**BOSMURMUR**	OKURA LIKA MURMUR S3J	g	A	**231**	88	184	217	130	97	521	67	99	97	88	104	84	CRV
16	**VAVOOM**	ROCKLEIGH PARK VALERIAN VAVOOM	g	A	**227**	75	147	179	175	86	71	27	100	98	65	102	69	ABS
17	**ALMERBOND**	ALMERVISTA BOND	g	A	**225**	71	169	233	134	84	69	24	101	108	61	99	63	ALT
18	**VANAHLEM**	PANNOO ABE VANAHLEM	g	A	**214**	91	167	244	128	99	2087	302	107	109	96	98	91	ALT
19	**SANDBLAST**	NOWELL SANDBLAST	g	A	**209**	88	171	168	174	98	693	133	102	105	88	103	87	AGR
20	**TAILBOARD**	NOWELL TARSAN	g	A	**208**	92	152	209	156	99	1552	266	104	103	91	97	97	GAC
21	**CSCMELVARA**	WALLACEDALE MELVARA	g	A	**207**	74	174	233	116	86	101	37	107	112	73	100	61	ABS
22	**ARIES**	NOWELL ZODIAC	g	A	**200**	74	151	143	132	84	64	23	99	99	70	102	71	
23	**RASCAL**	NOWELL RASCAL	g	A	**188**	69	165	221	76	79	42	17	109	109	63	96	66	
24	**DELIAN**	LOXLEIGH DELIAN	g	A	**181**	76	133	209	129	87	78	44	108	106	66	101	71	GAC
25	**MAXIMUM**	SUNSET CANYON MAXIMUM	g	A	**180**	88	150	204	63	97	275	60	106	102	86	103	91	AGR

Jersey Profit - Genomic ABV(g)s
Balanced Performance Index (BPI)

					INDICES				PRODUCTION				TYPE			FERTILITY		
PROFIT RANK	BULL ID	BULL NAME	GENOMICS INCLUDED	AUSTRALIAN PROVEN OR INTERNATIONAL	BPI ($)	RELIABILITY	HWI	TWI	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	SOURCE
1	**DROGO**	BEULAH BRAX DROGO	g	A	**328**	44	259	348	222	56	0	0	107	107	33	98	28	GAC
2	**BROWNLOW**	DALBORA BRAX 5097 BROWNLOW	g	A	**300**	43	225	312	208	55	0	0	105	107	33	100	28	AGR
3	**CRVBRAX**	PANNOO BRAX	g	A	**298**	50	233	350	182	62	0	0	112	112	41	99	35	CRV
4	**GRIFF**	KAARAMONA GRIFFIN	g	A	**297**	50	224	310	202	62	0	0	107	110	40	101	34	GAC
5	**CSCBANDANNA**	ARALUEN PARK BANDANNA	g	A	**296**	50	217	320	190	62	0	0	108	109	42	100	36	ABS
6	**BORAT**	BROOKBORA TBONE BORAT	g	A	**291**	52	204	306	212	63	0	0	105	105	43	97	37	GAC
7	**LEVIGENES**	BROADLIN LEVI	g	A	**288**	51	205	289	219	63	0	0	105	105	43	99	38	GAC
8	**DOUBLEUP**	BROADLIN DOUBLEUP	g	A	**284**	46	194	234	250	59	0	0	99	99	36	103	26	GAC
9	**SHAQ**	NOWELL SHAQ	g	A	**280**	56	198	284	192	67	0	0	106	105	48	102	43	
10	**BONTINO**	CAIRNBRAE BONTINO	g	A	**278**	49	192	292	204	62	0	0	104	108	38	98	34	AGR
11	**CRVMUMFORD**	WHITE STAR MUMFORD	g	A	**275**	50	183	266	232	62	0	0	104	106	41	100	34	CRV
12	**CSCFERRARI**	INVERLAIR HEIGHTS RACEWAY FERRARI	g	A	**270**	53	198	281	181	64	0	0	106	107	45	99	40	ABS
13	**SEGA**	KADDY LARFALOT SEGA - ET	g	A	**266**	65	157	259	248	76	33	15	105	100	59	94	58	GAC
14	**SANDSTORM**	KADDY ELTON SANDSTORM	g	A	**265**	58	168	249	237	69	0	0	102	100	51	97	46	TLG
15	**CRVLINE**	PANNOO VLINE	g	A	**265**	56	185	263	173	68	0	0	107	104	49	104	45	CRV
16	**SEVILLA**	ARALUEN PARK SEVILLE	g	A	**261**	50	196	257	184	62	0	0	104	104	40	99	34	GAC
17	**CRVSANDRIFT**	KADDY ELTON SANDRIFT	g	A	**260**	57	184	265	190	69	0	0	105	103	50	98	45	CRV
18	**TAHBILK**	BEULAH TAHBILK	g	A	**260**	48	214	294	133	59	0	0	108	110	38	100	33	GAC
19	**HARDROCK**	ARALUEN PARK BAND	g	A	**259**	50	186	279	162	62	0	0	106	107	42	98	35	GAC
20	**CRVGAVIN**	WHITE STAR GAVIN	g	A	**257**	49	187	274	184	60	0	0	105	104	40	98	34	CRV

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**

2015 Australian Breeding Values – Good Bulls Guide

THE Good Bulls GUIDE

August 2015

Red Breeds Profit - Proven Australia
Balanced Performance Index (BPI)

PROFIT RANK	BULL ID	BULL NAME	BREED	AUSTRALIAN PROVEN OR INTERNATIONAL	INDICES				PRODUCTION				TYPE			FERTILITY		SOURCE
					BPI ($)	RELIABILITY	HWI	TWI	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	DAUGHTER FERTILITY	RELIABILITY	
1	**VFOSKE**	V FOSKE	U	A	**335**	86	243	329	222	96	158	19	106	106	84	106	82	VIK
2	**GEDB02263**	G EDBO	U	A	**218**	80	208	195	97	94	88	11	96#	101#	60	99	82	VIK
3	**RANDERSDAVID**	R DAVID	U	A	**215**	85	191	209	66	95	139	33	99	100	79	104	87	VIK
4	**ATOSIKKO**	ASMO TOSIKKO	U	A	**201**	87	157	205	140	96	176	23	98	103	87	99	84	VIK
5	**FASTRUP**	R FASTRUP	U	A	**201**	85	159	204	119	95	134	19	104	102	82	103	85	VIK
6	**VRSOLERO2851**	VR SOLERO	U	A	**196**	73	151	191	126	86	31	11	98#	101#	57			VIK
7	**ARBOBAMA**	BEAULANDS OBAMA	U	A	**167**	72	122	174	125	89	61	25	102	101	49	102	59	GAC
8	**ARBBONJOVI**	BOSGOWAN BON JOVI	U	A	**160**	89	113	129	122	99	748	155	99	100	82	104	90	GAC
9	**ARBLEVER**	LOUVIC LEVER	U	A	**150**	76	150	172	57	91	74	33	101	105	56	102	66	GAC
10	**RBANGKOK**	R BANGKOK	U	A	**150**	85	128	194	34	97	206	19	105#	107#	62	101	88	VIK
11	**ARBBOBDOWN**	LODEN BOB	U	A	**148**	91	92	108	143	99	1788	248	100	99	87	96	96	GAC
12	**ARBLIPPMAN**	BOSGOWAN LIPPMAN	U	A	**140**	79	125	144	104	94	114	42	101	105	51	100	75	GAC

Guernsey Profit
Balanced Performance Index (BPI)

PROFIT RANK	BULL ID	BULL NAME	AUSTRALIAN PROVEN OR INTERNATIONAL	INDICES				PRODUCTION					TYPE			FERTILITY		SOURCE
				BPI ($)	RELIABILITY	HWI	TWI	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	FOREIGN DAUGHTERS FIRST	OVERALL TYPE	MAMMARY SYSTEM	RELIABILITY	FERTILITY	RELIABILITY	
1	**7G398**	SNIDERS RONALDS ALSTAR	I	120	56	109	114	62	67			264	101	102	59	102	65	GAC
2	**ICYICEBERG**	SPRING WALK ICY ICEBERG	I	104	56	43	64	139	67			85	100	94	60	103	59	AGR
3	**7GU00438**	MARODORE AARONS LEVI	I	102	40	88	142	59	49			32	108	107	48	100	34	WWS
4	**AUSFAYSBOO**	KOOKABURRA FAYS BOO	A	99	70	90	90	29	91	78	27					99	69	
5	**GUACTION**	BROOKLEIGH BQ ACTION	A	99	75	131	120	-38	90	66	12		102	105	72	105	63	SEM
6	**7GU00428**	GOLDEN J SKIPPER GARY	I	89	48	48	106	88	59			81	106	102	52	98	44	WWS

Brown Swiss Profit
Balanced Performance Index (BPI)

PROFIT RANK	BULL ID	BULL NAME	AUSTRALIAN PROVEN OR INTERNATIONAL	INDICES				PRODUCTION					LONGEVITY		FERTILITY		SOURCE
				BPI ($)	RELIABILITY	HWI	TWI	ASI	RELIABILITY	AUSTRALIAN DAUGHTERS	AUSTRALIAN HERDS	FOREIGN DAUGHTERS FIRST	SURVIVAL	RELIABILITY	FERTILITY	RELIABILITY	
1	**GGVASSLI**	VASSLI	I	**204**	33	145	186	175	60			136					GGI
2	**GGEVENT**	EVENT	A	**187**	69	143	178	125	92	91	32		105	61	98	69	GGI
3	**54BS0437**	COZY NOOK BEAMER TORCH	I	**98**	31	63	88	101	59			154					ALT
4	**BSCAFINO**	VETSCHS DENTESSO CAFINO	I	**94**	37	59	83	102	69			3318					SEM
5	**76B0900**	VICTORY ACRES SIMON EVEN	A	**94**	69	75	97	54	92	58	28		101	58	96	70	
6	**SUPHARDY**	SUPERBROWN HARDY	I	**87**	29	57	78	87	59			149					CRV
7	**SWISSEDGE**	ELM PARK JUPITERS EDGE	A	**86**	75	75	71	26	97	249	77		102	78	106	85	GAC
8	**SUPNOEL**	SUPERBROWN CA MASCARI NOEL	I	**82**	29	49	72	96	54			84					CRV

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**

2015 Australian Breeding Values – Top Herd Summary

Top Holstein herds based on herd average BPI, August 2015 ABVs.

BPI rank	Owner name	Address	Post code	National Herd ID	Cows on file	Current cows	No. of (g) cows	BPI	ASI	Prot. ABV	Prot % ABV	Milk ABV	Fat ABV	Fat % ABV
1	Wagner G	Winnaleah	7265	T63SWAA	3,137	67	98	128	105	17	0.06	533	22	-0.02
2	Hogg, A & J	Biggara	3707	C00155U	914	199	144	123	103	15	0.13	308	16	0.05
3	Henry TW & T	Tinamba	3859	240108T	2,544	501	325	116	87	15	0.06	416	15	-0.04
4	Kitchen Far	Boyanup	6237	W00248F	2,048	431	108	115	88	14	0.06	391	17	0.01
5	Sprunt RG (Easy Dairy)	Kaarimba	3635	C01125S	529	185	148	107	75	14	0.03	445	15	-0.06
6	Parrish, TJ & LR	Barrengarry	2577	N00544Q	1,267	66	304	105	69	10	0.06	265	14	0.04
6	Anderson WR & BL	Kongwak	3951	540597R	1,364	271	145	105	87	14	0.08	355	14	-0.01
8	Dickson BJ & JL,	Terang	3264	850441U	3,164	979	306	103	82	15	0.06	423	13	-0.08
9	Guye, Ashley	Barwon Downs	3242	770030J	461	59	0	97	52	11	-0.05	513	14	-0.12
10	Willcocks P & I	Yankalilla	5203	S00047P	944	198	134	95	61	12	0	454	12	-0.11
11	Johnston R & L	Bundalaguah	3851	240024G	2,392	804	44	94	76	14	0.01	517	16	-0.08
12	Hoey Dm & L	Katunga	3640	4I0025F	94	55	28	93	77	11	0.1	224	12	0.04
13	Walder RG & CA	Heathmere	3305	840404W	892	154	0	92	67	8	0.09	114	13	0.11
14	Uebergang IS & JA	Gorae West	3305	840391T	306	51	0	91	79	15	0.05	449	11	-0.11
15	Cook, RJ & JP	Edi Upper	3678	C00276F	2,148	582	108	90	80	14	0.06	395	14	-0.04
16	Perrett RJ & HE	Kongwak	3951	540624E	776	309	12	89	65	15	-0.03	624	13	-0.2
17	Mcrae SA & NM	Nambrok	3847	2K0054J	743	459	103	87	67	10	0.07	235	12	0.02
17	MacQueen AD & GL	Yanakie	3960	540139F	1,381	241	124	87	77	13	0.09	290	10	-0.03
19	Coster B & M	Ripplebrook	3818	981306Q	2,308	907	271	85	73	11	0.07	271	12	0.01
20	TF Hutton And Sons	Whcl0070	6271	W00088D	2,208	503	0	83	61	5	0.13	-61	10	0.18
20	Lia TO & PM Pty Ltd	Nilma North	3821	540184S	737	192	0	83	89	15	0.04	470	19	-0.01
22	Heywood GA	Yarragon	3823	240851B	1,138	221	0	80	63	9	0.08	177	10	0.04
22	Lambalk, J & J	Timboon	3268	650274B	1,448	458	0	80	63	10	0.07	211	10	0.01
24	Lister Craig A	Calivil	3573	4A3216P	1,191	282	224	79	59	12	0.02	403	10	-0.11
25	Fielding R & D	South Riana	7316	T34GFJM	1,726	365	0	78	68	10	0.09	184	11	0.05
26	White WD & L	Carrajung	3844	340316V	542	98	0	76	50	-1	0.17	-358	11	0.37
26	White KL & DM & RL	Leongatha Sth	3953	540605F	1,427	388	273	76	68	11	0.05	311	13	-0.01
28	Moscript ME CJ & JM	Leongatha Sth	3953	540300E	909	188	0	74	50	11	-0.02	444	9	-0.14
28	Carnachan Z & B	Denison	3853	240294T	155	0	74	57	47	1	0.15	-261	9	0.29
30	Green, RJ LM & AE	Tamworth	2340	N00416Q	225	83	73	55	54	11	0.02	377	7	-0.13
31	Lawry A K & P M	Dingee	3571	4A1819R	498	121	72	55	53	9	0.04	248	8	-0.03
31	Derix GM & ME	Maffra	3860	270031H	130	58	72	55	50	5	0.09	29	9	0.11
33	Lillico JM & V	Smithton	7330	T13AHMV	849	63	71	55	50	9	0.02	300	9	-0.05
33	Coates JD & OR	Via Portland	3305	840377M	288	0	71	53	55	9	0.04	257	10	-0.01
33	Holloway I D & A M	Gundowring	3691	C00210E	612	0	71	52	57	9	0.06	209	9	0.01
33	Pekin JF, A & JG	Terang	3264	850550V	399	0	71	49	65	10	0.08	210	11	0.02
37	Mcrae AG L & EM	Heywood	3304	840329N	282	2	70	54	50	4	0.1	-50	10	0.17
37	Tracy S	Waratah Bay	3959	540162K	219	67	70	49	61	10	0.08	220	8	-0.02
39	Holt Family Trust	Bundalaguah	3851	240111W	66	0	69	47	60	7	0.1	39	11	0.13
40	Woodbine Holdings Pty	Lancaster	3620	B20571E	769	0	68	47	61	11	0.05	320	8	-0.08

2015 Australian Breeding Values – Top Herd Summary

BPI rank	Owner name	Address	Post code	National Herd ID	Cows on file	Current cows	No. of (g) cows	BPI	ASI	Prot. ABV	Prot % ABV	Milk ABV	Fat ABV	Fat % ABV
Top Jersey herds based on herd average BPI, August 2015 ABVs.														
1	Hoey DM & L	Katunga	3640	240699A	1,084	219	165	125	94	9	0.21	-24	16	0.33
2	Glennen C & CO	Terang	3264	850588C	2,779	484	48	122	93	7	0.24	-120	18	0.46
3	Worboys R & A	Kotta	3565	C00993T	1,127	181	0	107	71	6	0.17	-50	14	0.31
4	Mc Manus BT & CA .	Bamawm	3561	C00935T	774	174	0	88	54	4	0.15	-72	10	0.26
5	Codling & Baker	Larpent	3249	740064P	699	141	0	84	67	3	0.26	-272	11	0.49
6	Wyss Trading P/L	Boorcan	3265	850604I	1,412	88	0	82	53	1	0.2	-248	12	0.49
7	Moscript ME CJ & JM	Leongatha Sth	3953	540300E	1,053	113	18	80	38	1	0.13	-143	9	0.32
7	Van Den Bosch JH & CA	Lockington	3563	C00927B	387	58	0	80	51	1	0.22	-264	9	0.45
9	Boley Messrs PJ J	Karridale	6288	W00095S	521	32	0	79	76	7	-0.07	313	31	0.27
10	Gelbeado Park Jerseys	Won Wron Victoria	3971	340284T	1,792	373	203	78	49	4	0.12	-26	9	0.19
11	Bacon RLG & SL	Tennyson	3572	C00859H	1,800	293	82	77	34	3	0.07	-4	6	0.12
12	Smethurst Byron	Timboon	3268	650400L	599	62	63	76	48	7	0.06	133	6	-0.01
13	JS & KL Tanner,	East Framlingham	3265	841827A	354	41	0	74	22	0	0.09	-119	4	0.2
14	Saunders & Day TA & AG	Shady Creek	3821	981473R	1,282	488	122	68	39	4	0.08	9	8	0.14
15	Hill AJ, CA, SG & BF	Kolora	3265	850478V	700	225	0	66	44	3	0.13	-101	8	0.26
16	Gleeson Stephen G	Purnim	3278	842144T	895	148	0	64	32	1	0.13	-163	6	0.29
16	Brady PW	Tinamba	3860	240339I	1,859	222	113	64	36	1	0.14	-147	7	0.27
16	Akers R & H & G	Tallygaroopna	3634	C00637Q	1,608	526	77	64	40	3	0.09	-22	8	0.18
16	Francis GB & KJ	Yanakie	3960	540114L	512	68	0	64	41	1	0.2	-247	5	0.35
Top Red Breeds herds based on herd average BPI, August 2015 ABVs.														
Ayrshire														
1	Johnstone B & R	Hawksdale	3287	SM0023T	94	84	0	-75	-37	-9	0.03	-371	-8	0.11
2	Penfold DA & VE	Willow Grove	3825	5A0045H	313	33	0	-88	-58	-12	-0.01	-416	-10	0.12
3	Morris RM & LA	Heywood	3304	4A1468H	401	57	0	-130	-116	-17	-0.13	-368	-21	-0.08
4	Howlett VW & JS	Drumborg	3304	840369R	412	45	0	-131	-118	-16	-0.12	-372	-24	-0.12
Illawarra														
1	Chelmonte Farming	Brymaroo	4403	Q00203D	1,267	88	0	-55	-48	-12	-0.02	-411	-3	0.21
1	Williams G P & R C	Meningie	5264	4A1868T	1,304	334	0	-55	-35	-2	-0.07	71	-9	-0.17
3	Wieck B & J	Via Peranga	4352	Q00390G	649	56	0	-63	-49	-7	-0.07	-133	-6	-0.01
4	Carson JH & GL	Irrewillipe	3249	740170H	64	32	0	-67	-45	-3	-0.11	120	-8	-0.19
Aussie Red														
1	Graham RW & BC	Numbaa	2540	N00555U	1,464	544	0	97	53	9	0.03	260	11	0
2	Raleigh, Jan	Timboon	3268	650244V	724	239	0	80	31	3	0.07	-21	4	0.08
3	Leppin T & LJ	Bena	3946	540557N	1,477	413	0	76	34	4	0.08	-5	4	0.05
4	Coulthart C & G	Numbaa	2541	N00548F	40	38	0	75	22	4	-0.01	152	7	0
Top Brown Swiss herds based on herd average BPI, August 2015 ABVs.														
Brown Swiss														
1	Balfour PE & SM	Kanoona NSW	2550	B21285J	499	204	0	-12	-6	-1	0.05	-81	-3	0.01
2	Restdown Pastoral	Rochester	3561	C00871I	1,746	502	0	-14	-7	-3	0.08	-173	-1	0.16
3	Cooltah P'ship	Narromine	2821	N01423J	615	211	0	-15	-13	-3	0.08	-162	-6	0.05
4	Osborne MR & KJ	Jamberoo	2533	N00472K	261	67	0	-17	-17	-3	-0.03	-80	-1	0.07