Australian Dairy Herd Improvement Scheme

New services to support uptake of breeding value results

Daniel Abernethy
Michelle Axford
National Statistics

- Total Dairy Farms: 7,924 (48% herd recorded)
- Total Dairy Cows: 1.7 million (46% herd recorded)
- Average Herd Size: 202 cows

(Source: Dairy Australia, 2009 and ADHIS, 2009)
Distribution of dairies

- 12 herd recording centres.

- 64% in Vic.
ADHIS

Australian Dairy Herd Improvement Scheme is

- Australia’s independent genetic evaluation service.
- An initiative of the Australian Dairy Farmers (ADF) – subsidiary company
- Funded support from Dairy Australia (dairyfarmer levies)
- A member of Interbull since 1997
ADHIS’ Vision & Mission

Our Vision

• All dairy farmers understanding and using Australian Breeding Values (ABVs) to drive their genetic gain.

Our Mission (Our Purpose)

• To maximise the opportunity for Australian dairy farmers to profit through independent world leading dairy genetic improvement services.
Social Research

  - System is based on good scientific knowledge and ‘it works’.
  - Farmers are seeking a simplified ABV system.
  - Farmers are heavily reliant on advisers to make breeding decisions.
  - Hard to find independent advice.
ADHIS Strategic Plan

Genetic Evaluation

National Database and Data Services

Industry Extension and Education Services
The goal of the Genetics Learning Package is for Australian dairy farmers to increase their rate of genetic gain for profit, based on a greater understanding and use of ABVs. Communication, Education and Extension activities and tools.
Activity Areas

- Communication
- Tools
- Training
- New Activities

Newsletter Grab from ADHIS
(the Australian Dairy Herd Improvement Scheme)
For immediate release: January 2009
(word count short version: 250 words, full version 430)
Extension Areas of Activity

- Communication
- Tools
- Training
- Consultation
Genemail

- Electronic newsletter
  - ADHIS issues, updates
- Published monthly since November ‘08
- Quick information on topics of interest
- Subscribe by registering on ADHIS website
Genomics communication

- Genomics brochures
  - 1. Introduction to Genomics
  - 2. Publication of genomic breeding values
  - 3. Implementation
- Australian dairyfarmer article featuring farmer articles
Other Communication Activities

Better genes means more money

The Henrys have always said that breeding cows with better genetics is a profitable strategy. Throughout the years, their selection decisions have been focused on breeding cows with high genetic merit, with their herd now ranked 11th in the country based on its Australian Selection Index (ASI).

The Henrys milk a 500-cow, split-calving herd on their property, which is the Macalister Demonstration Farm (MDF). Mr Henry was particularly interested in the results from a recent analysis of MDH herd records, which looked at the link between genetics and profit.

Cows in the MDH herd were grouped according to their genetic merit based on their individual ASI.

An analysis of production records for four locations showed that cows in the high genetic merit group generated about $710 more income per lactation than those in the lower genetic merit group. They also utilized 704 days in milk, two lactations longer than herd averages.

Mr Henry said he was not surprised by the results, but he was encouraged to know that his herd conformed to the breeding recommendations.
Welcome to the Australian Dairy Herd Improvement Scheme

The dairy industry's independent genetic evaluation service.

**News**
- **Updates to 2003 ABVs**
  - Daniel Abernethy - 8 June 2008
  - In 2005 a number of improvements to the ABV system have been implemented. They include the rolling of the base for all ABVs, improvement to the calci.

- **Vision 2004 Conference**
  - Daniel Abernethy - 9 June 2008
  - On Wednesday 4th August ADHIS held its Vision 2004 Conference. Participants from every aspect of the dairy industry were represented. To view/download...

- **Selectabull**
  - Michelle McFarland - 16 July 2009
  - Finding the best bulls available for your breeding program is easier than ever with the release of the web-based Selectabull tool on the ADHIS website...

**Events**
- **Release of Daughter Progress Reports and Provisional Breeding Values**
  - Judith Schweitzer - 16 December 2009

- **Selectabull**
  - An Australian Dairy Herd Improvement Scheme Tool

**Display a Bull**
- Displayabull

ADHIS is an Australian Dairy Farmers initiative that receives the majority of its funding from Dairy Australia through the Dairy Service Levy.
Welcome to Selectabull

Genetics is an important contributor to farm profit. Make genetic improvement work for you by using Selectabull to build your breeding objective and simplify bull selection.

What is ADHIS?

The Australian Dairy Herd Improvement Scheme (ADHIS) owns and manages Australia’s national independent dairy genetic evaluation database on behalf of dairy farmers.

How can Selectabull Help Me?

Simplify bull selection with Selectabull. This tool helps farmers build a breeding objective that suits individual conditions and find bulls that are likely to achieve the objective. You can print, save and export your search results.

Breeding for Success

The genetic merit of a herd is a permanent resource that compounds year on year, regardless of what the season brings.
Comprehensive Search

This search function allows you to build a customised index which meets the needs of your farm.

Select your priority traits by ticking the box beside each trait name. Then, decide how important the trait is to you on a scale of -10 to +10. More than 0 means more of a trait (i.e., taller stature). Less than 0 means less of a trait (i.e., shorter stature).

If you want to review your breeding objective or move to the quick search, simply select from the menu on the left of the screen.

Prepared by: Eye Media Australia Pty Ltd
Breeding Objective: Breeding Objective #1
Last Updated: Tuesday 21st of April 2009 08:40:16 AM

Australian Breeding Values (ABV)

Production

- ASI: 5.000
- Protein %
- Milk L
- Fat kg
- Protein kg
- Fat %

Non-Production Management

- Milking Speed
- Survival: 5
- Daughter Fertility: 5
- Temperament
- Cell Count
- Likability
- Liveweight

Non-Production Type

- Overall Type: 10.000
- Udder Texture
- Mamm System
- Bone Quality
- Stature
- Angularity
Your search criteria have produced the following bull list. Different report styles are available by clicking the tabs along the top of the list.

Now it's time to speak to your local semen supplier to finalise your selections from this short list.

### Results Listing

<table>
<thead>
<tr>
<th>Bull ID</th>
<th>Bull Name</th>
<th>Bull Owner Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>JACKAROO</td>
<td>KIRK ANDREWS TALENTED JACKSON</td>
<td>ABS</td>
</tr>
<tr>
<td>CRANA</td>
<td>BUSHLEA WAVES FABULON</td>
<td>GAC</td>
</tr>
<tr>
<td>HOGOLDWYN</td>
<td>BRAEDEALE GOLDWYN</td>
<td>SEM</td>
</tr>
<tr>
<td>YUKON</td>
<td>CARENDA YUKON</td>
<td>GAC</td>
</tr>
<tr>
<td>GOLDSMITH</td>
<td>TOPSPEED H POTTER</td>
<td>GAC</td>
</tr>
<tr>
<td>MILLCOY</td>
<td>MANNA FARM DECOY</td>
<td>GAC</td>
</tr>
<tr>
<td>DONANTE</td>
<td>HILL VALLEY DON ANDANTE ET</td>
<td>GAC</td>
</tr>
<tr>
<td>INFORMER</td>
<td>HILL VALLEY BASAR ACME</td>
<td>GAC</td>
</tr>
<tr>
<td>MYLUCK</td>
<td>JOAX MYLUCK</td>
<td>ABS</td>
</tr>
<tr>
<td>JOCKO</td>
<td>JOCKO BESN</td>
<td>AGR</td>
</tr>
<tr>
<td>SOLVIT</td>
<td>KIRK ANDREWS FORCEFULL</td>
<td>GAC</td>
</tr>
</tbody>
</table>
Genetics = Profit DVD

- DVD resource that strengthens the link between genetics and profit

- Move benefits of genetics from the theoretical to the concrete. What is the real benefit of genetics on my farm (or my client’s farm)?

- Based on interviews with key advocates

- Distribution initially targeted to non-herd improvement service providers
Herd ’09 Conference

- In conjunction with NHIA and Holstein Australia, ADHIS is a partner in Herd ’09
  - An environment for active stakeholder interaction
  - Professional development and networking

- Update with latest information, including genomics

- 180 attendees representing AB companies, resellers, researchers, extension and education staff, farmers
Technotes and Factsheets

- **Technotes** – targeted at breeding adviser group
- **Factsheets** – targeted at farmers

**Technote Latest Topics**
- Production Index (PI)
- Breeding for Survival (Longevity)
- APR – Updated Formula

**Factsheet Latest Topics**
- Develop a Breeding Objective
- Develop a Breeding Plan
Planned Training Opportunities

Breeding Advisor Training
Supporting clients in developing a breeding objective and use ABVs to find bulls to meet objective?

Selectabull workshops (DEC)
Half day 'in practice' workshop
Supports Selectabull

Manage Dairy Breeding (NCDEA)
Develop breeding objective in the context of the farm management environment.
Focus on the practice of bull selection.

Develop understanding of genetic principles. Apply in the development and implementation of a breeding objective & plan

Student Training (NCDEA)
Competency based training and assessment program
First introduction to dairy cattle breeding
Provide training tools on ADHIS website
Accompanying training and assessment program offered through NCDEA
New Activities
Top Bull Lists

- Focuses attention on the top group of bulls
- Re-ranks top bulls by common breeding objectives
  - Type
  - Production
  - Survival (Longevity)
  - Mastitis Resistance
Good Bull Guide

- Define “top” group of bulls
- Re-rank this list (top bull list) by common breeding objectives
  - Type
  - Production
  - Survival (Longevity)
  - Mastitis Resistance
  - ???

“Pick from the Guide”
Tracking Genetic Gain – Farmer Tool

- Tracking national population
- Bringing it back to the Farm
  - Genetic Gain at farm level
  - Comparison to national trend
  - Review of sires used
  - ‘Benchmarking’
Fertility Focus 00/01: Seasonal

Trevor & Yvonne Jones
Back Bourke Road
The Sticks
9873

Report date: 20/06/01
Herd ID: 654321
No of cows included: 272
These cows calved between: 27/05/00 and 02/01/01
Mating start & stop date: 04/11/00 - 05/04/01
Planned start of calving: 13/08/01

1) Overall herd reproductive performance

6-week in-calf rate
Percentage of cows pregnant in the first 6 weeks of mating

Your herd: 61% (59-64%)
Aim above: 71%

Not-in-calf rate
Percentage of cows not pregnant after 22 weeks of mating

Your herd: 14% (13-16%)
Aim below: 8%

2) Drivers of the 6-week in-calf rate

3-week submission rate
% of cows that were inseminated in the first 3 weeks of mating

Your herd: 77%
Aim above: 86%

Non-return rate
% of inseminations that were not followed by a return to heat

Your herd

Conception rate
% of inseminations that resulted in a confirmed pregnancy

Your herd: 52%
Aim above: 53%
Mastitis Focus Report

MACALISTER RESEARCH FARM
PO BOX 87
MAFFRA, 3860

YOUR HERD ANNUAL PERFORMANCE SUMMARY

Clinical Case Rates
- Calving: Your Herd 1 cases per 100 cows calved
- Lactation: Your Herd 1 cases per 100 cows in milk per month

New Infection Rate
- Subclinical & Clinical: Your Herd 5 cases per 100 cows in milk per month

Herd Milk Cell Counts
Average cell count at the 4 most recent tests:
- 07.05.09 216
- 09.03.09 136
- 06.01.09 173
- 12.12.08 165

KEY MANAGEMENT AREAS IN FOCUS

Your calving system ★★★★★
Monthly clinical case rate at calving (all cows)
When cases occurred

Clinical mastitis ★
Monthly clinical case rate in lactation (all cows)
When cases occurred

First calver clinical case rate
Your Herd 0 cases per 100 first calvers
Trigger >5

Total clinical cases
Your Herd 45 cases

Treatment failure
Cases with an extended treatment
Your Herd 0%
Trigger >20%
Genetics Focus Report

MACALISTER RESEARCH FARM
PO BOX 87
MAFFRA, 3860

YOUR HERD ANNUAL PERFORMANCE SUMMARY

Breeding Objective

KEY MANAGEMENT AREAS IN FOCUS

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of bulls</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982</td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
</tr>
</tbody>
</table>

- Bulls used in Good Bulls Guide: 8
- Bulls used not in Good Bulls Guide: 2
- Progeny Test Bulls used: 4
The challenge is still ahead

Questions