

Update on Genetic Evaluation in Australia Including Introduction of Test-Day Model

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Background

Australia's independent national genetic evaluation service has been operating since 1982. Known as the Australian Dairy Herd Improvement Scheme (ADHIS), it is owned and operated by the dairy industry's peak farmer organisation, the Australian Dairy Farmers' Federation Limited (ADFF).

ADHIS is funded partly by an annual grant from the Dairy Research and Development Corporation (DRDC) and partly by income generated through sales of breeding values (ABV's).

The grant covers the science-based aspects of ABV production including staffing and computing requirements. This underpins the organisation and allows for ongoing development of the system. Our sales revenue covers administration, promotion and extension.

The Australian Dairy Industry

In 1998 over 2 million cows were milked in Australia. Of these some 970,000 were individually herd recorded. ADHIS have a formal agreement with Australia's sixteen herd recording centres to provide data at least six times each year. From these dumps, ADHIS create the national database from which ABV's, associated reports and statistics are calculated.

The Australian Model

In July 1998 Australia introduced an "All Breeds" model. Initially all breeds are analysed together, with crossbreeds retained in their own herd/year/season group. Breeds are then reported from different bases.

This change corresponded with a move to a new in-house computer system and an updated customised database. (Sun Clone, 2 Gig RAM, 80 Gig Useable disk space).

The flexibility of the new database has been a boon for ADHIS. Additional report facilities are now provided to AB centres and this greatly enhances ADHIS' services. Likewise researchers have improved access to data sets because of the attributes of the new database.

Test-Day Model

Convinced of the advantages of the Wiggans and Goddard Test-Day model, the ADHIS Board approved its implementation and this began in 1999. Dr Les Jones of ADHIS is managing this task. Still in the early stages of implementation, Dr Jones in preparing the ABV system, for the new model.

As well as technical challenges, ADHIS must consider consultation strategies that satisfy industry of the merit of the new model.

Interbull is an important part of this strategy. The ability of the Interbull centre to schedule fixed testing periods, for new models, assists its members greatly in this task. In other words any official implementation in Australia must be preceded by approval of the model through the Interbull genetic trend tests.

Whilst ADHIS have stated publicly that the Test-Day Model is due to be officially introduced in the year 2000, the ADHIS Board is even more committed to a thorough consultation process, where stakeholders are aware of the likely changes due to model upgrades. Given the effectiveness of the current ADHIS model, the ADHIS Board is under no pressure to rush the introduction of Test-Day.

Change of Base 2000

Since ABV's commenced in 1982, the base from which they are reported has not been updated. In line with Interbull recommendations, ADHIS will update the base in February 2000.

Because the base is very old, the change in ABV's for production traits is quite large. Hence the public relations exercise is more of a challenge than it might be in other countries, where the base is changed more often.

To assist dairyfarmers understand the change we have committed resources to education, extension and media campaigns. This involves 'train the trainer' strategies, where key herd improvement staff deliver an overhead presentation of behalf of ADHIS.

ADHIS plan to update the base every five years from now on.

Internet Site

<http://www.adhis.com.au>

Perhaps the biggest change to the way we do business at ADHIS, has been our move to almost total internet delivery of our services.

In the past, ABV release week involved the printing, or at least creation of diskettes, and mailing of numerous bulk packages of ABV's. This took many days in staff resources. Similarly all reports to AB centres and herd improvement centres were delivered in hard copy.

The ADHIS website now has over 200 registered users, 84 of who are known as *business partners* and are authorised to purchase services via download.

All ADHIS services can be accessed by our customers, via their user name and password on the website. No printed material changes hands between ADHIS and our key AB centre clients. The website has replaced mail and fax totally and to some extent phone. The use of email groups, generated via the website results in significant cost and time savings.

Based in Lotus Notes software, the site was relatively cheap to create. ADHIS chose to host the site in-house, due to cost considerations.

Whilst it is difficult to quantify the time savings and the improvement in service range and delivery, I believe it is one of a small percentage of websites which can pay for itself in a relatively short space of time. This is because of the focus on a data interchange system, rather than a "brochure" type website.

The ease with which the Lotus Notes sites can be updated is another key feature. This helps avoid the "out-of-dateness" that plagues so many websites.