

APR measures profit

From
Robert Poole,
Executive
Officer of
ADHIS



the most profitable cows under Australian conditions. The Australian Profit Ranking (APR) is a total profit equation to help dairyfarmers to maximise profit from genetic change.

Many factors affect the profitability of Australian dairy cows and most of these are now measured by ADHIS. The importance of each trait is calculated using the income and expenses of an average Australian dairy farm and then including genetic parameters. Twenty-six different dairy farm situations were considered to ensure the APR was relevant to Australian dairy environments.

The percentage contribution of different ABV traits to the APR is shown in the table.

Liveweight (a measure of maintenance cost) and Somatic

Genetic gain accounts for about one-third of production gains in dairy cows. Obtaining this gain is as easy as using AI bulls that have achieved high ABVs following testing in quality progeny-test schemes.

The message that ADHIS hears from Australian dairyfarmers is that while they want high production cows, they also want functional animals.

In other words, Australian dairyfarmers want to select for

Australian Profit Ranking (APR)

$$(3.8 \times \text{Protein ABV}) + (0.9 \times \text{Fat ABV}) - (0.048 \times \text{Milk ABV}) + (3.9 \times \text{Survival Index}) + (1.2 \times \text{Milking Speed ABV}) + (2.0 \times \text{Temperament}) - (0.26 \times \text{Liveweight ABV}) - (0.34 \times \text{SCC ABV})$$

Percentage contribution of traits in the APR

Trait	%
ASI (production)	68
Survival (type, likeability and survival)	12
Somatic Cell Count	7
Temperament	5
Milking Speed	4
Liveweight	4

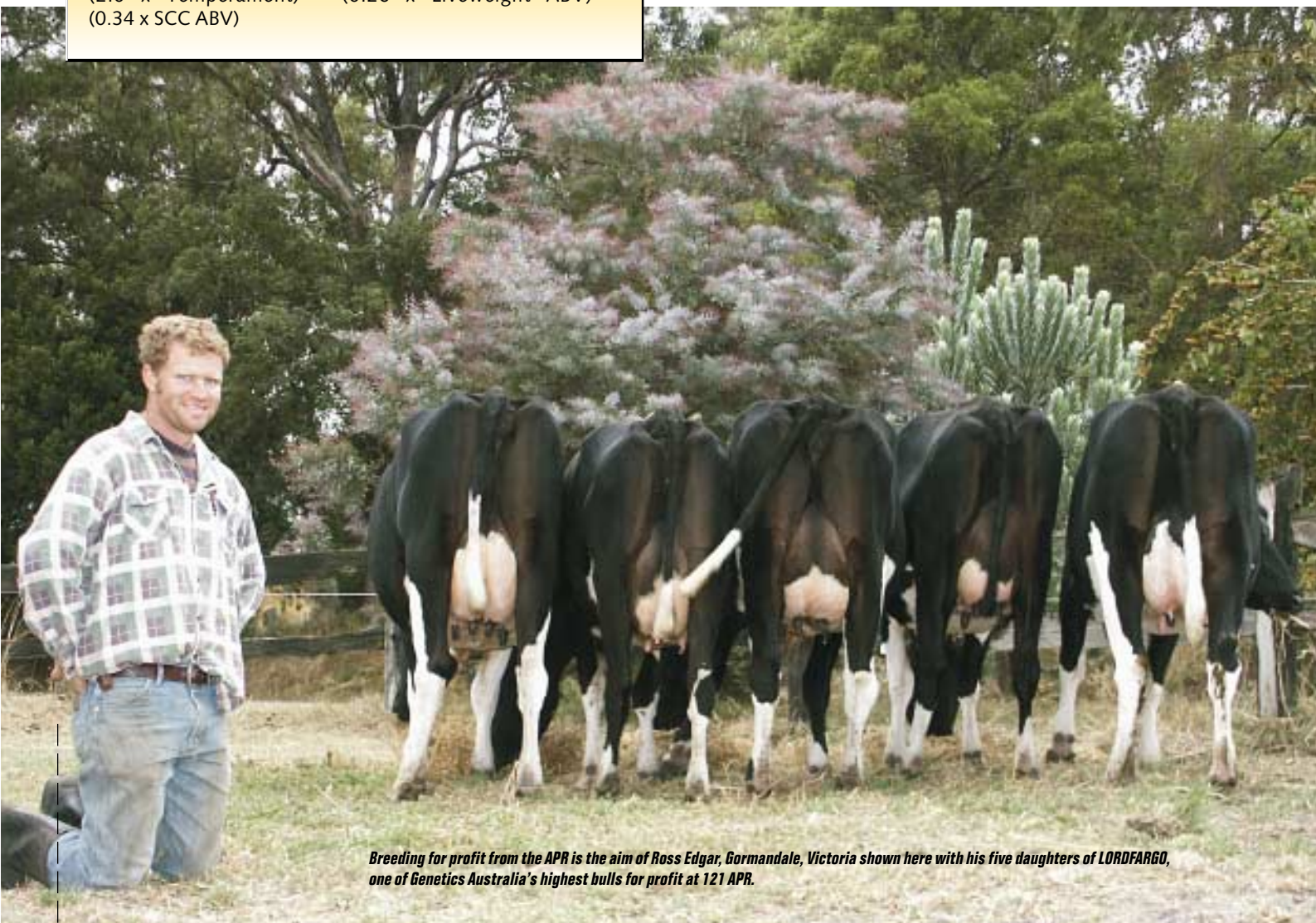
Cell Count (a measure of mastitis susceptibility) have been added to the APR in 2002. ADHIS plans to include Fertility ABVs in the APR in 2003.

A bull with an APR of 100 is estimated to improve the profitability of his daughters by \$50 per cow per lactation (the APR is halved as half the genes come from the mother). By using high APR bulls a dairyfarmer will maximise the profitability from genetic improvement.

ADHIS suggests that maximising profit from genetic change

involves four key steps:

1. Use the highest APR bulls you can afford, providing they represent value for money.
2. Use a percentage of progeny-test semen from a quality program. On average PT bulls provide quality genetics that will bring down your average semen price and help prove the next generation of elite bulls.
3. Keep good records and minimise inbreeding.
4. Breed enough AI heifers to replace at least 20% of the herd annually.



Breeding for profit from the APR is the aim of Ross Edgar, Gormandale, Victoria shown here with his five daughters of LORDFARGO, one of Genetics Australia's highest bulls for profit at 121 APR.