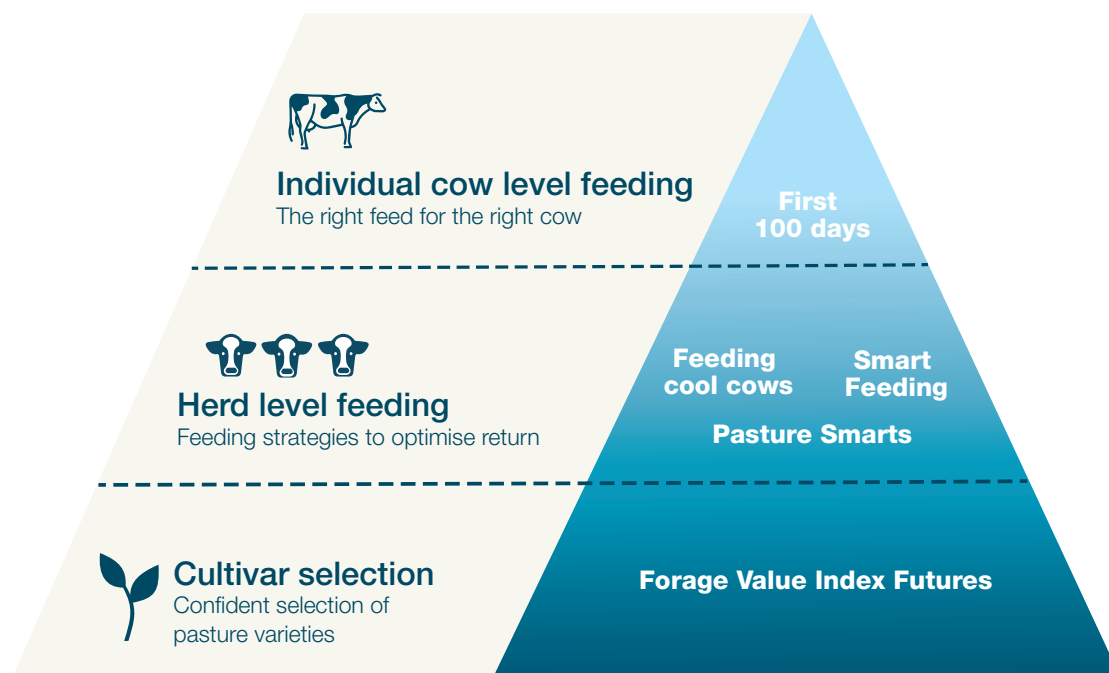# DairyFeedbase

Solutions for feedbase management

DairyFeedbase is the dairy industry's leading innovation program designed to revolutionise feedbase management on Australian dairy farms.

A joint venture between Dairy Australia, Gardiner Foundation and Agriculture Victoria, DairyFeedbase was launched in 2018 and uses the latest technology and science to significantly improve on-farm profitability.

The program has the potential to see returns to the industry of $100 million a year in 10 years. Farmers can expect DairyFeedbase to deliver easy-to-use digital tools and real-time information to improve decision-making in the paddock and strategically allocate feed at both herd and individual cow level.

Individual cow level feeding
The right feed for the right cow

Herd level feeding
Feeding strategies to optimise return

Cultivar selection
Confident selection of pasture varieties

First 100 days

Feeding cool cows

Smart Feeding

Pasture Smarts

Forage Value Index Futures

Individual cow level feeding Project: First 100 days

Assist farmers to deliver the right feed for the right cow, to better supplement cows for peak lactation, improve productivity and animal health and identify early metabolic issues.

You can expect:

• New approaches to allocate feed at an individual cow level

• Improved feed efficiencies to benefit overall farm economic performance

Herd level feeding Projects: Pasture Smarts, Smart Feeding, Feeding Cool Cows

DairyFeedbase will assist farmers with modern, user friendly tools designed to automate pasture measurement improved pasture allocation, leading to more pasture grazed, and conserved on Australian dairy farms. It will also help to better allocate available feed resources at a herd level and develop diets so cows can withstand Australia's hot weather conditions.

You can expect:

• New feeding strategies during hot weather

• New targets for genetic selection to breed cows for Australian conditions

• Tools for more informed pasture management decision making

• Strategies to optimise feed allocation and productivity at a herd level

Cultivar selection Project: Forage Value Index Futures

DairyFeedbase will boost the quality of data and information within Dairy Australia's Forage Value Index so farmers can make even better cultivar selection decisions for their farms.

You can expect:

• More confident selection of pasture varieties

• A focus in varieties with 20 per cent more productivity

Dairy Australia

AGRICULTURE VICTORIA

GARDINER FOUNDATION

For more information go to **dairyfeedbase.com.au**

DairyBio

Bioscience solutions for pastures and animals

DairyBio is a large government and industry initiative to improve pastures and dairy herds through new bioscience based innovations.

How will DairyBio improve pastures?

DairyBio focuses on three key areas of pasture performance – yield, persistence and quality. Yield increases of up to 35 per cent are possible with new hybrid breeding methods and the development of a DNA-based assessment of pasture called genomic selection. Quality of pastures will increase through new breeding technologies that reduce the indigestible part of ryegrass and improve environmental impacts. Persistence will increase through endophytes (fungi) with novel properties and through breeding for drought tolerance.

The initial focus is to improve perennial ryegrass, the major pasture species in temperate regions of Australia. Further work will also improve short-term ryegrass and warm season grasses and expand the relevance of the innovations to a broader range of Australian dairy farms.

How will DairyBio improve dairy herds?

Dairy herds have now extensively adopted the use of genomics, firstly as a tool to evaluate young bulls, and increasingly to test the merit of individual cows. DairyBio will strengthen both of these applications by developing a more robust test of an animal's merit and focusing on traits that can be improved from better use of cow records. New approaches will feature studies of the expression of genes and matching DNA data records from large industry libraries of Australian cattle records.

All of this work improves Australian farmers' ability to identify the best genetics for their herds, regardless of whether the genetics is sourced locally or imported, and with a greater ability to predict the merit of cattle across different breeds.

DairyBio will deliver innovations with big improvements in pasture yield, quality and persistence.

What is the scale of work in DairyBio?

DairyBio is a five-year, $60 million initiative with Agriculture Victoria, Dairy Australia and the Gardiner Foundation as joint venture partners and a range of investors in individual projects. Investors include global leaders in pasture and animal breeding and DairyNZ who invest on behalf of NZ dairy farmers. DataGene is also actively involved in the dairy cattle projects to deliver genetic evaluation services to the Australian dairy industry.

Agriculture Victoria and their academic partners conduct research activities with a team of over 80 people, including 25 PhD students. The main site of activity is AgriBio, a large research facility dedicated to agricultural bioscience and based in Bundoora, Victoria. Projects also are active at regional centres at Hamilton and Ellinbank. These arrangements continue a strong track record in the advanced and industrial-scale application of biological sciences.

When and how will farmers benefit from this work?

Farmers are now actively benefiting from work in dairy herd improvement, with an increasing confidence in the use of young "genomic" bulls. Regular improvements throughout DairyBio will improve reliability and enhance the quality of both existing traits and new traits. These improvements will accelerate the pace of genetic gain and deliver gains of $350 per cow per year by 2030.

New pasture cultivars will be the way that dairy farmers access innovations from the pasture program. Improved pasture cultivars will be available from 2023, with each new generation of cultivar set to include new technology that improves yield, persistence and quality. Cultivars available in 2030 have the potential to improve pasture productivity by $800 per hectare per year.

DairyBio will improve Australian farmers' ability to select elite genetics for their herds.

New sensor technologies for measuring pasture are key to commercial-scale breeding activities.

Dairy Australia

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