

Climate Smart Feedbase

Building resilient dairy farms that deliver more profit, long-term sustainability, and thriving landscapes.

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Australian Government Future Drought Fund: Scaling Success Program

A new project over the next couple of years will help dairy businesses strengthen feedbase performance, manage climate risk and improve long-term profitability across Queensland, New South Wales and northern Victoria.

Led by Subtropical Dairy, in partnership with the Queensland Department of Primary Industries (QDPI) and with the support of Dairy NSW and Murray Dairy, Climate Smart Feedbase responds to a rapid shift towards grain-based forages as dairy businesses manage reduced irrigation water availability, more frequent drought, volatile purchased-feed prices and the need to maintain cow performance during heat stress. Internal modelling indicates that by 2030 more than half of Australia's milk could be produced by about 1,300 businesses using grain-based forages as a core part of their feedbase.

Climate Smart Feedbase will connect farmers, agronomists, nutrition advisers, researchers and agribusinesses through communities of practice, facilitated discussion groups, demonstrations and extension resources.

Building on the Dairy Grains Mentor project

Delivered from 2021 to 2023, Dairy Grains Mentor reached 400 northern Australian dairy businesses with contemporary information on soil fertility, soil health, composting, crop nutrition and forage production. Fifty participating businesses improved agronomic practices across 1,500 hectares. Climate Smart Feedbase will review what those farms adopted, the benefits achieved and the barriers that remain, then use those lessons to support a wider eastern Australian audience.

The project will also provide an extension pathway for C4Milk research, particularly winter-forage fungicide management, improved forage sorghum genetics and high-forage nutrition strategies that increase margin over feed costs.

Project activities

1. Review Dairy Grains Mentor farms

Former participant farms will be revisited to identify practices adopted, benefits achieved, barriers to uptake and unforeseen outcomes. Findings will guide the promotion of high-benefit practices that currently have low adoption.

2. Establish an eastern Australian Community of Practice

A steering committee of farmers and service providers will guide recruitment and an online networking and extension framework. The expanded community will compare crop productivity and resource management across diverse dairy regions. Information on how to get involved in the Community of Practice will be available soon.

3. Use contemporary technology in online discussion groups

Ten Queensland dairy businesses will use satellite imagery, feed analysis and herd nutrition models to compare crop yields, production costs and milk-production potential. Groups will meet four times each year around critical farm decisions, with results shared across project channels.

4. Demonstrate fungicide best practice in winter forages

Farm-scale plots will demonstrate preventive fungicide use at stem elongation. Previous research indicates that this practice can lift yield and reduce growing costs by 30%, but adoption remains limited.

5. Maximise forage sorghum productivity

With an estimated 40% of northern Australian dairy businesses now growing sorghum forage, the project will assess new species and varieties under commercial conditions. Demonstrations will examine yield, quality, milk response, profitability and risk; harvesting stage and processing methods; and diet formulation for early-, mid- and late-lactation herds.

6. Control supplement costs during drought

An analysis of 30 dairy businesses will quantify exposure to volatile prices for grains, protein meals and by-products. A decision-support tool will help businesses test options to reduce or avoid margin losses when feed prices rise.

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Climate Smart Feedbase page on Northern Australian Dairy Hub

The Northern Australian Dairy Hub now contains a collection of past Northern Horizons articles covering silage production from soil management through to feeding and diet formulation. These articles can be found here. As the project grows, we will expand these resources and publish relevant articles.

If you would like to know more about Climate Smart Feedbase, please contact

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