Pasture Smarts Partner Farms – Northern Victoria

DairyFeedbase is one of the dairy industry's leading applied research and innovation programs designed to revolutionise feedbase management on Australian dairy farms. A joint venture between Dairy Australia, Gardiner Dairy Foundation and Agriculture Victoria, DairyFeedbase was launched in 2018 and uses the latest technology and bioscience to significantly improve on-farm profitability. The program has the potential to see returns to the industry of $100 million a year within 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 a herd and individual cow level.

About Pasture Smarts

We all appreciate the value of pasture and can agree that it is important to manage pasture well and optimise utilisation, but we also know it's not always an easy thing to do, especially considering the increasing demands of larger properties and animals.

The Pasture Smarts project aims to create a new management framework for measuring and utilising pasture that leads to higher yields, grazed and conserved more effectively, with better management of risks, and with a goal of simplifying day-to-day management.

This project is developing tools that allow the automated assessment of pasture dry matter yield and nutritive characteristics and is packaging these to enable real-time and forecast allocation of pasture to grazing cattle. These tools build on the principles of grazing management that exist today but allow these principles to be applied in a time-efficient manner on-farm. Over the last 18 months we have been working with seven partner farms across Victoria and South Australia. We have taken extensive (over 3000) pasture cuts from these farms over that time and have tested a range of tools and produced a prototype mobile application (app) and farm dashboard.

Dr Liz Morse-McNabb
Senior Research Scientist

Liz is a Senior Research Scientist and leads the Pasture Smarts project within the DairyFeedbase program. Liz is a remote sensing scientist, specialising in satellite platforms with an undergraduate degree in agriculture. She has developed substantial expertise in the capture, collation, management, integration and delivery of large spatial datasets since joining the department in 2003.

Dr Alister Lawson
Research Scientist

Alister is a Research Scientist specialising in forage agronomy based at Agriculture Victoria's Tatura SmartFarm. Recent projects have focussed on the development of better adapted forage systems for irrigated dairy systems under conditions of limited and variable water supplies. Alister's current work in the Pasture Smarts project is focussed on the calibration of ground-based equipment for the determination of pasture mass and nutritive characteristics.

Dr Craig Beverly
Senior Research Scientist

Craig is a Senior Research Scientist based at Agriculture Victoria's Rutherglen research facility with extensive experience in the formulation, development and application of numerical models to simulate natural resource systems. Craig is developing a range of biophysical models to simulate the impacts of land management on pasture performance and nutrient dynamics under various climate futures and landscapes. Craig is also developing techniques to integrate in situ and remote sensed data to improve seasonal forecasts of agricultural productivity relating to pasture-based dairy systems across various scales.

Turn over for more information about the levels of participation

If you have any queries, please contact the project leader: Dr Liz Morse-McNabb at **elizabeth.morse-mcnabb@agriculture.vic.gov.au**

DairyFeedbase

Pasture Smarts Partner Farms – Levels of participation

How you can help

We are looking to partner with more farms across Victoria to test that our models work and get your feedback on the prototype mobile app and dashboard. We would really appreciate access to your farm at least once to gather a set of pasture cuts and use our sensor technologies. This would provide evidence that this work can also be applied on other farms. We would also like you to test our mobile app and dashboard while providing feedback on what you like, don't like and features that you think are missing. We will set up a farm map with you, capturing all your paddocks and laneways and the current forage type of each paddock.

Project timeline

We aim to have our additional partner farms all mapped and ready to go by mid-April 2021. We would like these farmers to remain in the program until at least June 2022.

Phase 1

We will set up your farm map, take some field measurements and then provide you with a mobile app and dashboard customised for your farm.

You then will be provided with whole paddock estimates of pasture yield and a feed wedge to use in your day to day grazing management. You can also use the app to enter your own information. This is not essential but useful to us while we are developing the models for continued accuracy checking. If you make a major change like changing your forage mix in a paddock, then you will need to inform us.

Phase 2

Paddock spatial variability will be provided directly to your app and dashboard.

Phase 3

A forecast of pasture growth per paddock will be provided directly to your app and dashboard.

Anna Weeks
Research Scientist

Anna is a Research Scientist based at Agriculture Victoria's Rutherglen research facility who works on establishing key relationships between environmental drivers and agricultural productivity by developing software applications to extrapolate these relationships across time and space. This work involves collaboration with scientists across specialised agricultural fields, including biosecurity, remote sensing, and farming systems.

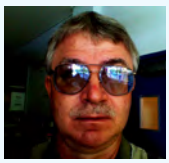
Graeme Phyland
Technical Officer

Graeme joined the department in 1989 as the farm 'Jack of all Trades'. He is currently a Technical Officer working in the Animal Production Sciences team at Agriculture Victoria's Tatura SmartFarm. Graeme has a remote pilot licence (RPL) for UAVs up to 25 kg and is skilled in pasture assessment measurements.

Liz Byrne
Technical Officer

Liz is based at Agriculture Victoria's Tatura SmartFarm and has worked as a Technical Officer across a range of crop, pasture and animal projects. She currently processes data for the Pasture Smarts project.

Richard Dabrowski
Technical Support



Ric is a Technical Officer who has provided technical support in a range of research projects at Agriculture Victoria's research facilities Bendigo, Kyabram and now at Tatura since 1993.

If you would like additional information or an expression of interest form

Please contact the project leader: Dr Liz Morse-McNabb at **elizabeth.morse-mcnabb@agriculture.vic.gov.au**
DairyFeedbase.com.au

AGRICULTURE VICTORIA Dairy Australia GARDINER FOUNDATION

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