

MODELLING DAIRY FARMING SYSTEMS

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Providing robust analysis of the impact of potential changes on the profitability of dairy farm systems

Project Team: Bill Wales, Dan Armstrong, Christie Ho, Lyndal Metcalf, Janna Heard, Marg Jenkin, Katherine Tarrant and Ashleigh Michael of the Victorian Department of Primary Industries, Bill Malcolm (University of Melbourne), Ian Gibb (Consultant, Farmanco), Peter Doyle (Consultant) and John Mulvany (Consultant).

PROJECT OBJECTIVES

- ◆ **Analyse** the impacts of climate and seasonal variability and labour saving technologies on the profitability of dairy farming systems in Victoria.
- ◆ **Create** strong extension and research links.
- ◆ **Develop** capability in systems analyses.
- ◆ **Examine** the needs of other dairy regions or industries.

KEY ACTIVITIES

- ◆ Katherine Tarrant has joined the team at half time and will be based at Ellinbank. Katherine will be increasing our capability in the area of dairy farm systems modelling.
- ◆ Following a workshop conducted by Janna Heard, Dan Armstrong, Bill Malcolm and Bill Wales in early December 2007, the WestVic Dairy board have responded positively to a preliminary project application for research to commence in 2008/09. A full project proposal for modelling southern Victorian dairy farm systems is currently being completed (this combines work in south-west Victoria and Gippsland).
- ◆ Following successful funding from GippsDairy to run a pilot project in 2007/08, the first steering group meeting for the Gippsland region was held in February. Development of a combined project with south-west Victoria was discussed and selection criteria for the first case study farm were agreed.
- ◆ Bill Wales participated in discussions about the farm systems research at the Northern Regional Extension Committee meeting in January.
- ◆ Christie presented a project update at the DPI regional economists meeting in February. Discussions were also held at the meeting about how the regional economists can better interact with DPI policy groups and the new Chief Economist.

FURTHER INFORMATION:

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KEY ACTIVITIES (cont'd)

- ◆ Dan Armstrong, Lyndal Metcalf and Ian Gibb contributed significantly to the Seasonal Update days held in northern Victoria. The team presented the latest drought analysis from the project. 384 participants attended the 10 sessions. Key feedback from farmers was that they are now better informed in planning for the autumn, winter and next season, as well as having more confidence to make management decisions going forward. Service providers felt it was valuable information to pass to clients.



- ◆ Lyndal Metcalf and Dan Armstrong also contributed significantly to the development and delivery of the 'Dairy Farm Forage Systems for the Future' seminars, held at Cohuna and Finley. The workshops looked at the issues, decisions and risks associated with deciding what mix of forages to grow on a dairy farm.
- ◆ Dan Armstrong talked about farming systems analysis from the Future Dairy and Future Farming Systems projects to a group of 12 extension and research staff from Missouri USA in February. The group thought the approach to the Future Farming Systems work was very relevant to their industry.
- ◆ A project overview document is being developed for general distribution.

WHAT'S NEXT?

- ◆ Analysis of the profitability of subsurface drip irrigation for grazed pastures. The Subsurface Drip project, based at DPI Tatura, will be providing technical information from their experimental work.
- ◆ Economic analyses of feeding facility and machinery options to reduce wastage of conserved fodder for dairy farms in northern Victoria.



- ◆ Completion of full project proposal for southern Victoria.
- ◆ Selection of a case study farm for the pilot study in Gippsland.
- ◆ Economic analysis of automatic cup removers. This analysis will look at milking style, shed and herd size and labour efficiency.

STAFF PROFILE**Janna Heard
Research Scientist**

- ◆ Janna is based at DPI Hamilton and has recently joined the team. She will be responsible for activities in the south-west and northern irrigation regions of Victoria.
- ◆ Janna began work at DPI Kyabram in 1997 as a scientist in the animal nutrition group, and was the principal investigator of the Decision Support Systems Project. She also managed 2 experiments associated with a project aiming to enrich milk with selenium.
- ◆ Janna has authored 5 refereed journal papers, and currently works four days a week with DPI and one day a week on her family's farm at Glenthompson.

