

Pilot topoclimate project

Background

In 2007 a group of Kangaroo Island farmers undertook a week long farm tour of Tasmania. As a result, the group indentified the need to develop three key aspects of KI farming:

- greater diversification
- niche marketing
- value adding.

The Board of Agriculture Kangaroo Island met to discuss the implications and in conjunction with the KI Development Board a small group was set up to investigate funding opportunities and projects to support the islands agricultural industry.

What was done

Funding for a project was secured by the KI Development Board through the Department of Trade and Economic Development, and the KI Natural Resources Management Board agreed to provide in-kind and cash funding.

Rural Solutions SA arranged to provide in-kind support and Greg Johnsson and the KI Development Board linked the group into an exciting project concept known as Topoclimate.

Topoclimate provides very detailed soil and microclimate mapping which will enable producers to pick their best-bet options for improved farming practices and identify options for value adding and product diversification.

A pilot Topoclimate farm planning project involving nine properties was established on KI in early March. The project was set up to measure and map the microclimates of the properties over the next fifteen

months. First signs of activity (see figure 1) will be the positioning of over 100 mesh cages containing temperature data loggers to measure temperatures every 10 minutes, 24 hours a day, in order to identify the unique microclimates of each property.

Each property site will be intensively surveyed for soil data, rainfall, microclimate salinity, environmental values and water resources over a twelve month period. This information will then be incorporated into a Topoclimate Farm Plan for each property.

The aim of the project is to create enhanced farm plans for the farmers, facilitate product diversification, improve and target farm management and enhance resilience to climate change.

The potential outcomes for South Australia and their importance can be seen through the application of Topoclimate technology in other farming economies. Topoclimate was used extensively in New Zealand to rejuvenate the agricultural sector in the Southlands community. Over a period of four years, the project led to a turnaround in the economy and an increase in employment of 3000 jobs, not only across the agriculture industry but also across other occupations servicing the growing community.

Results

The production and farm management lessons learned during the project will be made available to the KI farming community and wider South Australia through a range of information events, including field days, offered during the project and at the conclusion of the programme.

The project manager and contractor will work closely with all key stakeholders and project participants to ensure the

information generated through this project translates into real outcomes of niche product diversification and information.



FIGURE 1

Topoclimate temperature data loggers like these will soon start appearing on nine Kangaroo Island properties as part of the KI Pilot Topoclimate Project

**For further information
contact**

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Funding/Sponsors

- Department of Trade and Economic Development
- Kangaroo Island Development Board
- Kangaroo Island Natural Resources Management Board
- Rural Solutions SA
- The nine properties involved:
 - 'Bellevista' (R. & J. Bell)
 - 'Treville' (M. & M. Tremaine)
 - 'Deep Dene' (L. & C. Berry)
 - 'Wedgewood' (G. Nutt)
 - G. Johnsson
 - 'Muckra' (N. & P. Clark)
 - 'Turkey Lane' (J. & J. Symons)
 - 'Willson River' (M. & R. Willson)
 - 'Toomore' (R. & N. Trethewey).