

“White Clover Irrigation Project”

2010-11 Season Update

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Project Summary

The objective of the project is to improve the knowledge base of white clover irrigators and assist in further developing a professional approach to irrigation management. Specifically it aims to focus on the delivery of irrigation to reduce environmental water losses, increase efficiency in timing and potentially \$net return/ML applied, enhance pollination and exhibit to the wider public a significant advancement in irrigation practices that maximise minimal water use and hence the impact on the groundwater resource.

The project will further enhance understanding of the benefit and need for continual monitoring soil moisture technology for the purpose of irrigation scheduling, give leverage and be leveraged by the developing understanding and use of ETo, crop factors and crop evapotranspiration in irrigation management. The research will serve as a good case study for the use of improved irrigation delivery for centre pivots for all pasture seeds as well as focus on the importance of soil moisture monitoring and the advantages it presents.

Results from 2010-11 season

On the basis of first year results, modifications to the sprinkler outputs and the soil moisture probes were undertaken prior to the closure of the white clover seed crop in October 2010. Modification of the trial design included a control which was the standard rotator configuration on the pivot and a statistically analysable replicated layout for the 2010/11 harvest.

As you know the white clover seed production season was hampered by significant rainfall. This challenged the irrigation management of the crop and hence the trial. The research was further challenged by the small plot harvester becoming unavailable at the point of harvest. The trial harvest process had to be modified and hand harvesting was invoked as well as use of a conventional header. Hand harvested samples are currently being assessed. The highlight of the research this season was that soil moisture levels were able to be reduced to well below previously considered ‘acceptable’ levels with no apparent negative impact on seed yield under any of the treatments. The soil moisture data recorded through this season will be of particular value to the irrigated white clover seed industry and to pasture irrigators in general.

