

# **Practical and Effective Water Use Efficiency Measurement and Management Methods for the Australian Cotton Industry**

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Irrigation consultants and the National Centre for Engineering in Agriculture at the University of Southern Queensland have been working with Australian Irrigated Cotton Growers to improve their water use efficiency. This collaboration has seen the development of a collection of revolutionary techniques which have taken the theories behind evaporation and seepage and allowed for the practical measurement and mitigation of these losses for both commercial and environmental benefits. Main areas of work have included a farm water balance that can at any time in the season separate out how much water has been used in each area of the farm. Secondly consultants have been using surface simulation modeling to make irrigation performance precise and a highly accurate depth sensor coupled with weather data to partition evaporation and seepage losses throughout the system. This technique is also used to measure the effectiveness of various innovative mitigation strategies including damcovers and monolayers.