

MEDIA RELEASE

COTTON CAPTURES DATA ON “LOST” WATER

A cotton industry research project to measure the amount of water lost as drainage under irrigated cotton has reached - all systems go.

A state-of-the-art equilibrium tension drainage lysimeter, which took two and a half years of design and construction, was officially launched at ACRI Narrabri by Guy Roth, chief executive officer of the Cotton CRC.

Research team leader, Anthony Ringrose-Voase from CSIRO Land and Water, said wasted water has adverse impacts on both production and the environment through contamination of groundwater with salts and agrochemicals, and increased risk of salinity.

“Before its impact can be reduced it must be measured, but drainage is the trickiest part of the water balance to quantify. This new facility is designed to be ‘hydraulically invisible’ to provide the most accurate measurement possible of drainage two metres below the surface.

“It will also provide a benchmark for scientists to test other, simpler methods and to validate water balance models.

“The project involves investment by CRDC, Cotton Catchment Communities CRC, CSIRO Land and Water, NSW DPI and Qld Natural Resources and Mines to help the cotton industry improve both the productivity of water and minimise its environmental ‘footprint’,” he said.

In his launch address, Guy Roth said research of this nature is critical to the sustainability of farming systems and regional cotton communities.

“Despite significant technological advances, accurately measuring soil water content and the movement of water in soils and across the landscape has remained elusive.

He likened the role of the lysimeter and associated instruments to that of a field X-ray machine capable of penetrating layers of topsoil, sub-soil and aquifers and relaying relevant data for analysis and action.

“The facility will be used to develop and test other, cheaper methods for monitoring the water balance that can be used over a wider area.

“These will glean information on where water is dispersed in individual fields and different catchment zones; the volume and value of nutrients and salt being moved or removed; what water use efficiency and irrigation measures can be taken; and the overall impact of these developments on local and regional catchments, communities and river systems.

“By utilising this equipment and techniques developed by the project team, irrigators will be able to better understand soil water movement and manage their water more efficiently.”

Cotton CRC personnel involved in the project include Dr Anthony Ringrose-Voase and Tony Nadelko (CSIRO Land and Water), Dr Nilantha Hugalle (NSW DPI), Dr Des McGarry and Thusitha Gunawardena, (QNRM) and Helen Dugdale and Bruce Pyke from CRDC, which provided most of the funding.

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