

Department of Primary Industries and Fisheries
Queensland Government

Media Release

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Focus on furrow irrigation options

A RESEARCH project is underway to provide information on the alternatives to traditional furrow irrigation methods in cotton.

Called *Water use efficiency of siphon-less irrigation systems*, the project is part of an on-going initiative of the Queensland Government, the Cotton Australia RWUE2 project and the Cotton Catchment Communities CRC to study water use efficiencies in irrigated cotton.

The Cotton Research and Development Corporation, Sustainable Irrigation Systems, Department of Primary Industries and Fisheries, Queensland Murray Darling Committee, Border Rivers-Gwydir Catchment Management Authority, National Centre for Engineering in Agriculture, Natural Resources and Mines, NSW Department of Primary Industries and Aquatech support the project.

Joint project leader and consultant Sarah Hood of St George, said the project aims to assess the water use, uniformity of application, deep drainage, labour, installation and on-going costs of a number of systems that do not involve siphons.

"These are overhead (lateral move), bankless channel and Blache bay (bankless head ditch) and through the bank pipes (PTB), which will be compared with traditional siphon irrigated fields adjacent to each," she said.

The other project leader Emma Carrigan, a DPI&F extension officer at Goondiwindi, said there is a lot of interest in siphon-less irrigation.

"Irrigators are realising the need for higher precision in water application and associated benefits of labour saving, but there is a lack of comparative information on its benefits.

"For this reason the project will fulfil a real need within the industry."

Miss Carrigan said two of the sites are part of another joint NR&M-RWUE2 and Cotton Catchment Communities CRC project and so have had lysimeters installed to measure the deep drainage that is occurring.

"A lysimeter is a large undisturbed soil core into which suction drainage equipment and a logging system that measures and collects lost water are placed," she said.

"They are buried 150cm below the soil surface and give researchers scientists information about how much water is lost below the root zone and data to compare various irrigation systems to see which gives greater efficiency during irrigation."

Miss Hood said siphon-less irrigation systems have many perceived benefits:

- they save labour, are precise and flexible
- show improved water efficiency, and
- appear to have less deep drainage.

“As a result there has been an increase in the number of drip irrigation and overhead systems across the industry,” she said.

“More recently growers have been experimenting with siphon-less furrow irrigation alternatives such as pipes through the bank, bank-less channels and Blache bay, and have reported similar benefits.

“These are reduced labour requirements (initially offset by higher development costs), and water use efficiency estimated to be similar to or better than furrow irrigation.

“This project aims to quantify these early observations for the benefit of the wider industry,” Miss Hood said.

She said the project review would be released next June.

The other project team member is NR&M principal soil scientist Dr Des McGarry of Brisbane.

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