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To the Senate Standing Committees on Rural Affairs and Transport,

Thank you for the opportunity to make this submission to the Inquiry on the management of the Murray-Darling Basin.

In the Murray-Darling Basin, cotton is grown predominately in the Northern Basin. As emerging policy significantly changes water management in Australia the need for more research and better knowledge to improve irrigation efficiency, environmental productivity and community wellbeing is reinforced. The Cotton Catchment Communities CRC (Cotton CRC) has recently submitted a bid for an extension for a further five years funding. The proposal includes a Water program designed to address critical issues for agriculture, communities and the environment in addition to providing vital science to support the implementation of water reforms in collaboration with northern MDB communities.

Although farmers have become more opportunistic in their choice of crop, cotton still prevails above any other annual planted crop in dollar return per megalitre of water. Water is the most limiting constraint for cotton production. Our research supports sustainable cotton production by researching key questions posed by irrigators surrounding irrigation system efficiencies and water losses.

Two nationally significant issues related to environmental water are currently emerging in the Northern MDB. Firstly, the release of the Guide to the Basin Plan highlighted the need for local community engagement to agree on prioritising the environmental use of water. Secondly, the rapidly expanding coal seam gas (CSG) industry in these regions requires the extraction of vast quantities of groundwater. There is significant uncertainty regarding the expected impacts of CSG water extraction, use and disposal on surface and groundwater systems. This presents key research issues which the Cotton CRC's extension bid aims to investigate, including the impacts of CSG water extraction and use on the Condamine River Alluvium as well as using the CSG water for irrigation, socio-economic opportunities and constraints relating to CSG water and opportunities for enhancing ecosystem services using CSG water.

Our current research shows that communities in the NMDB are experiencing anxiety about diminishing water resources and uncertain allocations. This includes many communities such as Warren, Wee Waa, Moree, Bourke, Goondiwindi and St George which are highly vulnerable to any proposed changes to sustainable diversion limits. Research will provide knowledge to enable community adaptation to changing water availability and we proposed to hold annual community water forums.



Participants
Cotton Australia Ltd Cotton Research and Development Corporation
Cotton Seed Distributors Ltd. CSIRO Industry & Investment NSW
Queensland Department of Employment, Economic Development & Investment Department of Agriculture and Food WA
The University of New England The University of New South Wales The University of Sydney
University of Technology - Sydney

The Cotton CRC is based regionally, located in Narrabri, NSW with nearly 100 regional and rural partners. Research activities proposed in the Cotton CRC's extension bid will engage end users to address critical issues affecting the management of water to achieve sustainable agriculture, communities and environment in the Northern Murray Darling Basin.

Kind regards,

Jane Macfarlane
Catchment Programme Leader
Cotton Catchment Communities CRC