

# IMPROVING NUTRIENT MANAGEMENT REQUIRES A SYSTEMS APPROACH

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A key challenge facing the world, especially with a changing climate, is how to increase productivity of our agricultural systems while halting and reversing current unprecedented levels of environmental degradation. Seeking continual improvement in the way water and solutes (salts, nutrients and agrochemicals) are managed is essential to address these challenges.

In this paper I discuss the need to think across spatial (soil aggregates to catchments) and temporal (days to months) scales, the need to manage water and nutrients together rather than one separate from the other, and the challenge of addressing the ‘conflict’ between nitrogen and salt management, where the aim is to retain nitrogen within the root zone while exporting salt from it. I also draw on lessons learned from recent experience with the Australian Cooperative Research Centre’s System Harmonisation Program to highlight the need for a ‘systems approach’ to achieve better on-farm and environmental outcomes.

**Editor’s Note:** An extended manuscript has not yet been submitted for this presentation.