FINAL REPORT

GRDC
GRAINS RESEARCH & DEVELOPMENT CORPORATION

CSO217

Management of subsoils which limit production by constraining root growth

PROJECT DETAILS

PROJECT CODE:	CSO217
PROJECT TITLE:	MANAGEMENT OF SUBSOILS WHICH LIMIT PRODUCTION BY CONSTRAINING ROOT GROWTH
START DATE:	01.01.2000
END DATE:	01.06.2003
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ORGANISATION:	CSIRO LAND AND WATER
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Summary

This project aimed to address the priorities set out under section 3.4.2 of the GRDC Research Prospectus, in particular, 'innovative ways of enhancing crop performance on soils with hostile subsoil' and, to a lesser extent, 'understanding the biology of the soil-root interface'. It addresses directly the two gaps in current knowledge noted in the July 1999 workshop, i.e. 'what are the roots seeing?', and hydrology, which in part was the interaction of roots with macropores and throttles. The planned outcomes are improved management options for overcoming, and enhanced knowledge and capacity to predict the production and environmental consequences of, subsoil constraints to root growth and uptake.

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Outcomes

Environmental Outcomes

Better understanding of root system growth and plant water and nutrient uptake will lead to improved management of farming systems and natural resources. This will enhance understanding of dryland salinity as a result of vegetation clearing and provide a basis for vegetation type change and mosaic farming for the purpose of reducing dryland salinity.