



Grains Research and Development Corporation

Mr Peter Reading
MANAGING DIRECTOR

The Committee Secretary
Environment, Communication, Information Technology and the Arts References
Committee
Australian Senate
Parliament House
Canberra ACT 2600

12 May, 2005

Dear Secretary

Thank you for your letter and invitation to the Grains Research and Development Corporation (GRDC) to make a submission to the "Inquiry into the extent and economic impact of salinity in the Australian environment". Our submission is enclosed.

The GRDC is a significant investor in salinity and water management through its own programs and through the CRC for Plant Based Management of Dryland Salinity. These investments in salinity are part of the Corporation's broader mandate to plan and invest in research and development (R&D) for the greatest benefit of the Australian grains industry and have close links with the Commonwealth's major natural resource management (NRM) investments in the National Action Plan for Salinity and Water Quality and the Natural Heritage Trust.

These investments also help to address the Australian Government's National Research Priorities. Since the Commonwealth announced its National Research Priorities and its Rural Research Priorities the Corporation has achieved significant advances in its understanding of the economic impact of salinity in Australia's cropping regions and the cost-effectiveness of salinity management options. This places the Corporation in a strong position to develop and deliver the cost-effective solutions that will need to be an integral part of the salinity solution.

The Corporation delivered a submission to the House of Representatives' Science and Innovation Committee's inquiry 'Science overcoming salinity: Coordinating and extending the science to address the nation's salinity problem'. The key elements of this submission still hold, were captured by the inquiry but appear to be largely unaddressed.

A number of recommendations to the inquiry are included in the submission to improve the long-term success of federal programs that seek to reduce the extent and economic impact of salinity in the Australian environment. The strong links that the GRDC has with its grower stakeholder places the Corporation in a central position to link research with the implementation of salinity solutions.

If you have any specific questions in relation to the submission please contact the Corporation's Program Manager for Sustainable Farming Systems, Dr Martin Blumenthal on 02 6272 5525.

Yours sincerely

A handwritten signature in black ink, appearing to be 'Peter Reading', with a large, stylized loop at the end.

PETER READING
Managing Director

INQUIRY INTO THE EXTENT AND ECONOMIC IMPACT OF SALINITY IN THE AUSTRALIAN ENVIRONMENT

The Grain Research and Development Corporation is a significant investor in salinity and water management through its own programs and through the CRC for Plant Based Management of Dryland Salinity. These investments in salinity are part of the Corporation's broader mandate to plan and invest in research and development (R&D) for the greatest benefit of the Australian grains industry and have close links with the Australian Government's major natural resource management (NRM) investments in the National Action Plan for Salinity and Water Quality and the Natural Heritage Trust.

The inquiry seeks to assess the long-term success of federal programs that seek to reduce the extent of and economic impact of salinity in the Australian environment. The GRDC is not in a position to assess whether the goals of national programs to address salinity have been attained. Nor is it in a good position to comment on the role that regional catchment management authorities are required to play in the management of salinity-affected areas. Suffice to say that the GRDC and other Research and Development Corporations are partnering with regional bodies to undertake research, validation and integration of salinity management technology.

ACTIONS FOLLOWING THE HOUSE OF REPRESENTATIVES INQUIRY

GRDC recommendations to the inquiry

Our key recommendations to the House of Representatives' Science and Innovation Committee's inquiry 'Science overcoming salinity: Coordinating and extending the science to address the nation's salinity problem' still hold.

- i) The level of scientific knowledge is not adequate to address the salinity problem. A continued emphasis on research and development, especially in relation to profitable solutions to dryland salinity is required.
- ii) Greater scientific and technical support is required especially in Western Australia where salinity is having the greatest impact. A national approach to training and development is needed to build the capacity required.
- iii) The rural research and development corporations (RDCs) are fundamental to any Commonwealth coordination. They have the links to growers who ultimately make the land use change on the ground.
- iv) Partnerships between catchment bodies and regional industry grower groups are fundamental to achieve practical, profitable and effective on-ground change.
- v) Information from all jurisdictions on salinity management needs to be accessible to those who wish to implement land use change. A national database that is freely accessible, interactive and free of institutional bias needs to be established.

The House of Representatives' Science and Innovation Committee's inquiry 'Science overcoming salinity: Coordinating and extending the science to address the nation's salinity problem' made 24 recommendations. The GRDC's five recommendations

were all incorporated in one form or another in the overall report recommendations. Recommendation 9 applies directly to Research and Development Corporations like the GRDC:

- (a) invest more substantially in research for sustainable land use systems and in the development of new salinity technologies; and
- (b) conduct projects that forge links across commodities in farming systems

Actions following the inquiry

Continued investment linked to land-holders in catchment communities

The GRDC continues to invest in salinity management. In addition to the \$11.5 million investment between 2002-03 and 2007-08 outlined in the House of Representatives inquiry another \$3.5 million has been committed up to 2007-08. New projects have an emphasis on demonstrating integrated solutions in catchments, both plant and land management based. These investments are undertaken in collaboration with catchment bodies and with active participation of land-holders in the work.

Novel approaches to provide profitable options in the long and short-term

In addition, the GRDC continues to seek novel solutions that may assist land-holders in the future. One investment is exploring the potential for the development of a perennial grain crop that would be harvested, remain dormant over summer and regrow in the next autumn thus increasing the length of time that the crop is actively taking up soil water. The breeding of salt tolerant wheat varieties continues to be a priority to provide growers with productive options in the short term.

Profitable and sustainable solutions go "hand-in-hand"

The GRDC is a foundation industry and funding partner of the CRC for Plant Based Management of Dryland Salinity, investing \$750,000 p.a. and is working with other partners on a rebid for this CRC. The CRC is working closely with AWB Landmark to provide training to land-holders in salinity management as a key part of their farm enterprise. Instead of communicating profitability or sustainability outcomes, outcomes are examined in a whole-farm context. Work through the Managing Climate Variability Program and other climate management investments emphasise the efficient use of Available Soil Water and therefore reduced drainage below the root zone of the crop. Better use of water can lead to higher yielding crops, greater whole farm profitability and less recharge.

Whole-of-farm cross commodity R&D with catchment authorities

Across commodity work is occurring in the CRC for Plant Based Management of Dryland Salinity, the Grain and Graze Program and the proposed Pastures Australia collaboration. All these across commodity activities have an emphasis on increasing the perennality of systems to increase groundcover, water use and to reduce deep drainage and groundwater recharge. The Grain and Graze Program in particular has

forged partnerships with grower groups and catchment authorities with the express purpose of matching on-farm land use change to the achievement of catchment goals including goals relating to salinity and water quality.

Is a National Dryland Salinity Program still needed?

The recommendation of the inquiry to continue the National Dryland Salinity Program in some form has not been acted on. The GRDC is not convinced that a continuation of the National Dryland Salinity Program is the appropriate vehicle for coordination. The CRC for Plant Based Management of Dryland Salinity can fulfil this role to some extent. However, the CRC does not cover all aspects of salinity management. The National Action Plan for Salinity and Water Quality could take a more active national role in coordinating broader salinity management issues. A web-based information retrieval system that allows salinity workers and catchment authorities to assess information from all sources will help to allay the need for high-level national coordination.

REFERENCE

House of Representatives Standing Committee on Science and Innovation. (2004). *Science overcoming salinity: Coordinating and extending the science to address the nation's salinity problem*. The Parliament of the Commonwealth of Australia. 316 pp.