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NDSP TechNote

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Know-how to tackle salinity for:

- CATCHMENTS
- PRODUCTION

Farming Systems with lower recharge for Western Australia

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BACKGROUND—WHAT WE WANTED TO KNOW

The project focused on new cropping systems to better manage groundwater recharge, with the aim of developing and conducting a participative research approach with landowners.

The essence of Research and Development in this project is interaction with farmer groups at three levels:

- Primary farmer groups who are equal partners in complex and detailed R&D;
- Secondary farmer groups who conduct paddock-style experiments; and
- Tertiary farmer groups who conduct experiments either using on-farm R&D protocols supplied by the project team or their own co-ordinator who has been trained by the project team.

OUTCOMES—WHAT WE NOW KNOW

Data gathered to date added to existing knowledge about incorporating lucerne into cropping systems. It is likely that, after further analysis, this data will provide increased understanding at a systems scale.

The main outcomes so far are:

- Participating primary farmers identified the need for more information before they could confidently integrate the practice into their farming system. This occurred because the researchers and the farmers plan, implement and analyse the trials together.
- There has been limited involvement from the secondary and tertiary farmer audiences. This lack of farmer interest has been due to poor seasonal conditions and an underestimation of the resources needed to provide support to those groups.
- Economic analysis is showing that where farmers can grow lucerne, only a relatively small area can be grown after which the costs of establishment and on-going management start to reduce farm returns. This suggests only a relatively small proportion of the farm can be effectively managed for recharge using currently available plant-based methods in a predominantly grain-producing farming system.

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- There is a difficulty in extending the results of this project outside the immediate circle of participating farmers. Three reasons have been identified for this:
  - The participative farmers tend to be innovators and are prepared to take a risk with new practices especially if they have access to researchers.
  - The practices and systems are still in development and farmers want practices and options that they can be confident with and return a profit.
  - The atypical seasonal conditions over the duration of the project eroded farmer confidence in the usefulness of the information.
- The future development of any new cropping system would be viewed as a more credible option if it is in full partnership with farmers through a participative research approach.

WANT TO KNOW MORE?

It is expected that any new systems developed by this project will be documented in the Code of Good Agricultural Practice in the Management of Groundwater Recharge.

Knowledge generation from this project is on-going, but further information is available through the Department of Agriculture, Western Australia.

Go to:

- **National Dryland Salinity Program: www.ndsp.gov.au**
- **Department of Agriculture, WA www.agric.wa.gov.au**

The National Dryland Salinity Program is jointly supported by the following organisations

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