Section 4

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Farming Systems

Eyre Peninsula Farming Systems 3 Project – Responsive Farming Systems

A five year (2008-2013) GRDC funded project 'Eyre Peninsula Farming Systems 3 – Responsive Farming Systems' is aiming to assist farmers to understand what their land is capable of producing under a range of conditions and how to tailor inputs to get the most profitable outcomes.

On upper Eyre Peninsula (EP) farmers have always had to cope with a wide range of seasons, including runs of several years with below average growing season rainfall. One of the main factors affecting farm viability and profitability in these difficult seasons has been risk created by a mismatch of inputs and production. Looking forward, farmers will continue to face several challenges including a predicted increase in season variability, higher input costs, managing grain price volatility, and changing agronomic factors. Increasingly farmers need to understand exactly what their land is capable of producing under a range of conditions and how to tailor inputs or alter management to run low risk and flexible systems – 'responsive farming systems'.

Three **"focus sites"** have been established across upper EP on 3 major soil types;

- Minnipa (Minnipa Agricultural Centre), red sandy loam
- Mudamuckla (Mudabie), grey calcareous loamy sand
- Wharminda, siliceous sand over sodic clay

Collective groups of farmers, researchers and consultants set goals and make decisions about the management of these sites. Field days are then held to showcase the innovative ideas and hold discussions with farmers.

At these sites we are combining the latest soil and plant science with new machinery technology and ideas from local discussion groups. The sites have been EM38 mapped, yield mapped and variable rate technology is used for sowing and fertiliser applications. We are ground truthing modelling tools APSIM and Yield Prophet® to see if these programs will be a benefit in making better farming decisions as the year progresses.

The following series of articles are from trials undertaken in 2010 on the three focus sites:

- Responsive Farming Using Variable Rate Sowing at Minnipa
- Responsive Farming for Soil Type at Mudamuckla
- Responsive Farming for Soil Type at Wharminda
- Farming to Soil Potential on the Upper Eyre Peninsula: How Accurate was In-season Yield Prediction in 2010?
- Crop Production Using Replacement P Rates
- Measuring the Effect of Residual P
- Nitrogen Management on Upper Eyre Peninsula
- Wheat Variety Response to P on Grey Calcareous Soil

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