National WhopperCropper - delivering risk management to agricultural advisors

July 2004 – June 2007

Location: Queensland, New South Wales, Victoria and South Australia

Principal investigator

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The need

It is a paradox that in a country with one of the most variable climates in the world, cropping decisions are made with limited consideration of financial and resource management risks. There are significant opportunities for improved performance based on targeted information on risks of decision options. Critical decisions based on soil resources and agronomic inputs are made at the beginning of each cropping season. Many of these factors, as well as the forthcoming seasonal rainfall, will interact to produce a range of potential outcomes. Advisors and farmers could benefit from a simple tool that demonstrates these interactions. In doing this, they can better manage inputs in line with their attitude to risk.

How this project fits with MCV objectives

This project fits with the MCV goal of enabling improved climate risk management to farmers on a national scale.

Project objectives

> Deliver capability of improved climate risk management to a large number of grain-growers across Australia

> Evaluate uptake and outcomes of the WhopperCropper capability and determine the enhanced components best suited for inclusion in future versions of WhopperCropper

Methods

The overall aim is to develop a database of accurate and locally-validated APSIM runs for the important crops and districts within a region. To achieve this, we will:

> collaborate with local research and extension agronomists to set up APSIM simulations

> choose locations, crops, soils and management issues for APSIM simulations in conjunction with state collaborators

> use existing experimental data to parameterise the APSIM crop modules

> collect appropriate soils data (especially PAWC) for the regions of interest

> check long-term meteorological data from the chosen sites for accuracy before use

> source appropriate agronomic parameters from local agronomists and researchers

> conduct the large numbCrer of APSIM runs on the computer cluster at DPI&F Toowoomba; after validation, collate APSIM runs into the WhopperCropper database

> provide the program to the commercial partner for distribution and training of selected advisors in their 600-strong advisor network

Desired outcomes

> A large number of advisors and farmers throughout Australia with the capability to analyse the interaction of climate risk with the potential interaction of other crop inputs

> WhopperCropper will be an important tool in delivering climate risk management capability to a large number of field advisors; it will be easy to use and an effective analysis tool

Achievements to date

This project has built on the success of the previous project and has:

> released a new version (version 4) with
> - 5 new districts in northern NSW
> - more than 50 output variables (up from 8 in previous version)
> - improved SOI analysis screen
> - improved gross margin screen
> - statistical analysis capability

> created databases for sites in other states
> - 4 in WA
> - 6 in Vic
> - 4 in S NSW
> - 3 in SA

> put in place a new installation and licensing process to avoid illegal copies and allow version control

> trained 25 advisors and farmers in northern NSW

> trained 20 advisors in central/northern NSW

> trained 28 university students

> trained 4 software trainers within the commercial delivery partner's company

> 20 advisors in central/northern NSW evaluated the program

What is left to do?

> Complete the negotiated training program

> Increase the number of 'districts' in each state

> Add crops such as canola, field peas and barley to the crop range

> Investigate further uses for the WhopperCropper capability