

# Long term approach gets green light

The Grains Research and Development Corporation (GRDC) has extended its support for a long term research and demonstration project run by WANTFA at Cunderdin Agricultural College that is benefiting students and researchers investigating no-till farming systems.

The trials on the site evaluate the impact of different rotations and high residue no-till systems on crop yield, water use efficiency and soil health. This includes measuring soil carbon, water retention, weed management, plant diseases, insects and nematodes.

University of WA (UWA) Plant Biology lecturer, Dr Ken Flower, who is involved in running the project with Neil Cordingley from WANTFA, says the aim is to evaluate over a 10 or 12 year period the impact different rotations have on soil health and its subsequent effects on yields and crop economics.

"It's not simply about yield, year in, year out," Ken said.

"We want to understand better over the

longer term how different rotation strategies affect the sustainability of the system. For example, is there a long term benefit in foregoing one cash crop in the rotation by planting a cover crop which is not harvested? How much carbon is stored in the soil over a decade of running these rotations, and what impact does it have?"

## Four different rotation strategies

The trial site at Cunderdin is demonstrating four different rotation strategies:

- A high residue system which uses Saia oats as a cover crop followed by two years of Baudin barley;
- A more diverse version of the high residue strategy, which includes wheat, a legume-oats mix cover crop followed by canola;
- A high residue flexible farming system in which decisions on crop plantings are based on seasonal conditions and crop economics; and,
- A traditional wheat-barley-lupins rotation which is common in the area.

A similar site is also being run near Mingenew in conjunction with the Mingenew Irwin Group.

Ken said the aim is to understand the impact of the different strategies on soil health, water use and crop productivity and to draw conclusions and recommendations from that – rather than suggest to growers which of the rotations is best for them.

GRDC Western Panel Chairman Neil Young said the two sites were professionally run and well worth viewing by farmers during the upcoming spring field day season.

"This is a truly collaborative project which brings together people from CSIRO, the WA Department of Agriculture and Food, UWA, Curtin University, the Cunderdin Agricultural College, agricultural industry and grain growers to look long term at the sustainability of our farming systems.

"The GRDC is very pleased with the work done to date and that is why we have extended our support for these projects for another three years." ■



UWA's Dr Ken Flower (left) and WANTFA's Neil Cordingley at the WANTFA long term demonstration site at Cunderdin.