



CASE STUDY OF IMPACT  
June 2016



# Maximising yields and minimising costs for Australian grain growers

 Yield Prophet® decision support tool provides paddock-specific yield forecasts to optimise farmers’ investments.

## The challenge

In Australia, a land subject to high annual variation in grain yields, farmers find it challenging to adjust crop production inputs to potential crop yields. To maximise yields, farmers must make decisions regarding sowing dates, grain varieties, irrigation and fertiliser applications against the backdrop of paddock-specific considerations such as soil type and growing season rainfall. The uncertainty surrounding the effects of different management regimes on crop yields can lead to sub-optimal decisions, resulting in financial losses and adverse environmental impacts.

## The response

In collaboration with CSIRO, Birchip Cropping Group developed Yield Prophet®: an internet service which provides grain growers with real-time information about their crops. Yield Prophet® supports grain growers to

make better decisions with respect to inputs such as nitrogen application, crop varieties and irrigation levels. Yield Prophet® also uniquely provides a means for virtual monitoring of the progress of a crop throughout the season. This is particularly important for in-season decision support and for frequent reviewing, in real time, of the consequences of past decisions and past events on likely future outcomes.

## The impact

Yield Prophet® has transformed the maximum yield per hectare of average Australian wheat growers, leading to increased profitability for farmers. In addition, the use of Yield Prophet® is likely to result in environmental benefits, such as reducing the amount of nitrogen and other products exported into soil and waterways; and social benefits from increased resilience in regional communities.

---

“It’s fantastic – having access to this kind of science to check against your gut feel is just invaluable. Models like Yield Prophet® can save the industry millions of dollars by making decisions more clear cut.” Bill Long, South Australian grain grower.

---

A recent economic assessment estimates the net present value of the Yield Prophet® project to be approximately \$26.1 million with \$6.4 million attributable to CSIRO<sup>1</sup>.

<sup>1</sup> CSIRO, 2016. *Research Impact Evaluation – Yield Prophet Case Study*. CSIRO, Canberra.

### CONTACT US

**t** 1300 363 400  
+61 3 9545 2176  
**e** [csiroenquiries@csiro.au](mailto:csiroenquiries@csiro.au)  
**w** [www.csiro.au](http://www.csiro.au)

### WE DO THE EXTRAORDINARY EVERY DAY

We innovate for tomorrow and help improve today – for our customers, all Australians and the world.

**WE IMAGINE. WE COLLABORATE.  
WE INNOVATE.**

### FOR FURTHER INFORMATION

Dr Zvi Hochman  
Agriculture and Food  
**t** +61 7 3214 2234  
**e** [zvi.hochman@csiro.au](mailto:zvi.hochman@csiro.au)  
**w** [www.csiro.au/impact](http://www.csiro.au/impact)