

Online Farm Trials (OFT) Impact Research: eResearch (Second Wave) Extended Timeframe Research Study

Dr Amie Sexton, Dr Angela Murphy, Dr Ben Wills, Dr Nathan Robinson, Dr Judi Walters, Ms Jennifer Corbett, and Ms Julie Parker

Executive Summary

Online Farm Trials – Project and Research

Online Farm Trials (OFT) is an open access, online database of Australian grains trials information developed by the Centre for eResearch and Digital Innovation (CeRDI) at Federation University Australia for the Grains Research and Development Corporation (GRDC). OFT is led by a team of research academics and programmers, with high level industry expertise provided by a six member expert advisory panel. The underpinning goal of OFT is to improve the productivity and sustainability of Australia's grain farming enterprises by improving access to high quality trial research information. The OFT project achieves this through an online portal: www.farmtrials.com.au.

This report presents the findings from the second wave (Wave 2) of impact research, following on from the first wave (Wave 1) research conducted in 2016. The Wave 2 research investigates the impact of OFT in the grains industry, and considers the following areas of particular importance in building insights into the impact of OFT:

1. Barriers and enablers to uptake;
2. The impact of OFT on factors such as:
 - a. decision making;
 - b. farm development and environmental management processes;
 - c. enterprise enhancement;
 - d. issues of intergenerational change and decision support techniques;
 - e. overall practice change.

Methodology

The imperative for the research and the research methodology was clearly established in the first wave. The interpretive research approach enables an investigation into the impact of OFT on decision-making and on practice, in terms of knowledge, behaviour and attitudes. The following five overarching questions guided the data collection and analysis process:

1. What strategies in implementation of Online Farm Trials have worked most effectively to support and facilitate data access to the maximum numbers of potential end users?
2. What approaches applied during the eResearch relationship were found to maximise stakeholder input to the knowledge building process?
3. What have been the key impacts of Online Farm Trials for a range of key stakeholders, including growers, farming groups, researchers and agronomists?

4. How has Online Farm Trials effectively captured data that can be used to build evidence-based knowledge repositories to maximise access and minimise research duplication over the longer term?
5. In what ways does open data access, as provided through the tools and mechanisms of eResearch, impact on decision making and facilitate practice change?

As per the first wave of impact research, the success of OFT was once again assessed using a system of three levels of impact: primary, practice, and sector.

Data was collected via an online survey, interviews with identified key stakeholders, portal usage analysis via Google Analytics and document analysis. Data was analysed using established techniques for qualitative and quantitative data analysis. Data validity and generalisability was achieved through the use of triangulation of methods, source and design. Survey and interview participants represented a range of roles and groups in the Australian grains industry across all regions. The following table summarises data collected:

Data collection methods	Data collection Period	Profile of data accessed/ participant type
Document analysis	2016 – 2018	Documents relevant to OFT (promotional and marketing, website; funding applications; external documentation and agreements re OFT, email feedback) were reviewed using qualitative document content analysis techniques
Google Analytics	Feb 2016 – Feb 2019	Tracking of service usage data for users who have accessed the OFT web portal during the Wave 2 analysis period.
Online survey	Feb - Mar 2019	Site users, including, but not limited to, growers groups, agricultural consultants, industry representatives, panel members, funding body representatives, researchers, growers; Participants: survey = 53, interview = 10
Individual interviews	Mar 2019	

Findings

OFT portal usage was tracked and compared from 1 April 2016 to 30 March 2019, and divided into single years from April 1 to March 30. Over that three year period, the number of users has increased 66% from 24,833 in 2016-17 to 41,268 in 2018-19. There has been a steady increase in user numbers during the period, with an average of approximately 4,000 monthly users since mid-2018, with more than half of users located in Australia. While the increase in users is very positive, the qualitative research highlights that awareness of OFT is the most influential factor in its success – the greater awareness of OFT, the greater impact it will have.

The main users of OFT are advisors, agronomists, researchers, project managers and funding bodies, rather than growers. OFT is mostly used as a contextual tool when planning new projects as it quickly provides an overview of what trial research and development has already been done in the research area in question. As such, OFT is highly valued as a tool to reduce duplication of trials. In turn making Australia’s grains trials research sector more efficient. The search function and ability to refine results

to specific and relevant trials is the most highly valued component of OFT. The support and response of the OFT team to user queries and suggestions was rated very highly.

OFT is not replacing other sources of information, it is an additional resource that increases knowledge in the industry. OFT increases trial visibility to the sector, allowing more people to see more trial data. It has increased knowledge sharing and access, but reduces some interaction between people in the industry. Rather than having to call or email researchers to obtain trial information, trials information is freely discoverable via OFT. This is perceived very favourably as it significantly reduces the amount of time people spend finding information. This time saving has an economic impact, reducing the hours required to source information, as well as reducing duplication of trials.

Awareness of OFT emerged as the most influential factor in the impact of OFT in the grains industry, affecting both the contribution of trials and use of the site. There is a cycle of growth and value driven by awareness: the more that people in the grains industry (researchers, advisors, growers) are aware of OFT and its capabilities, the more it will be used (by contributors and users). As the numbers of available trials and number of people using OFT increases, so does its value and legitimacy (trust). As the value and legitimacy of OFT increases, the number of contributors and users will continue to increase. Thus the cycle continues and the impact increases, assisting the grains industry to achieve its goals of improved profitability and productivity.

Conclusions and recommendations

OFT is perceived as a valued tool for the grains industry. Participants in this study noted its potential to increase knowledge sharing, reduce duplication and host trial information. Analysis of the Wave 2 impact research led to the following recommendations to further enhance the success and impact of OFT:

Increase awareness through greater engagement activities:

1. Articulation of the benefits of OFT to contributors and users on the OFT website, through social media, in industry publications and in person.
2. Workshops to help users and contributors learn skills for searching and uploading.
3. Instructional videos.
4. Question and answer webpage.
5. Increase regular communication with users, blog/e-newsletter with seasonally relevant info.
6. Development and implementation of targeted engagement strategies for different market segments.
7. Create use cases and success story videos.
8. Relationship building with: GRDC Grower Relations Management, users, contributors, and the industry.
9. Engage an OFT ambassador or champion.

Continue to improve the data entry process:

10. Continue to make it easier and quicker for contributors to upload information.
11. Develop ways of embedding contribution of trials to OFT as a part of data management procedures for key organisations.
12. Focus on more recent trial contributions and facilitate the addition of 'trials-in-progress'.

The diagram below summarises the OFT impact cycle, where OFT contributes to research efficiency and in turn agronomic efficiency, leading to improved outcomes in the Australian grains sector.

OFT IMPACT CYCLE

