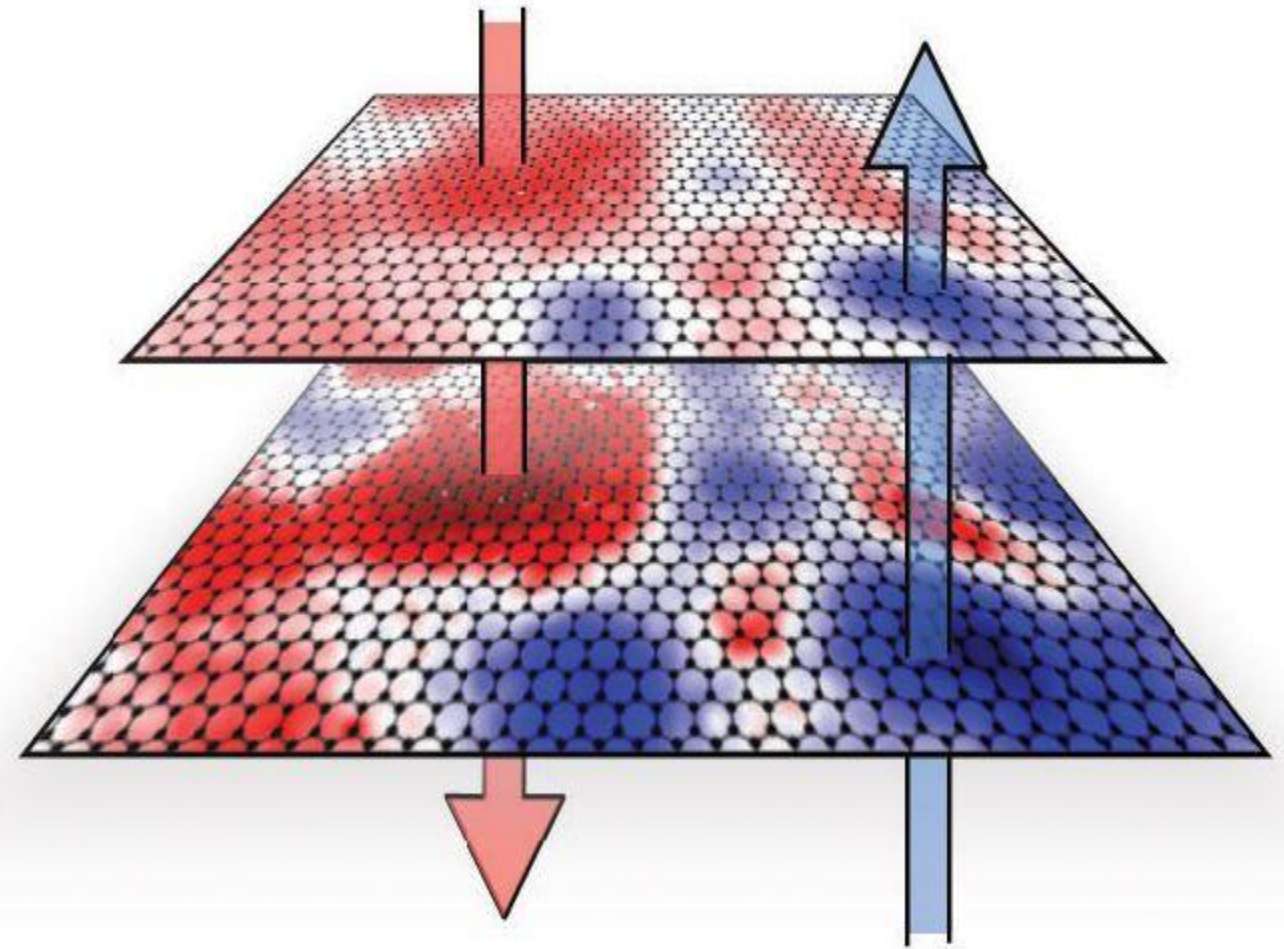


2 layered interlinked process

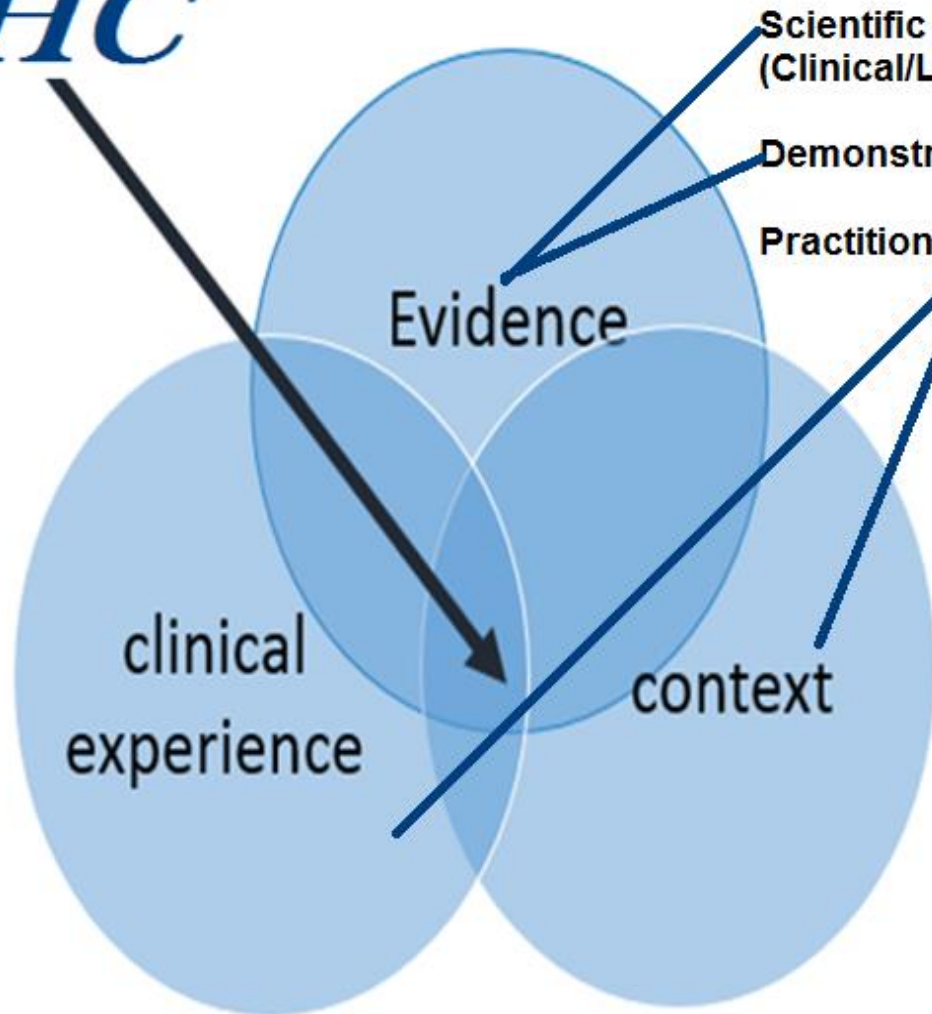
Layer 1: understanding, building and applying the evidence

Layer 2: Measuring & broadening impact across multiple points



NOT single evaluation /test/ trial

EBHC

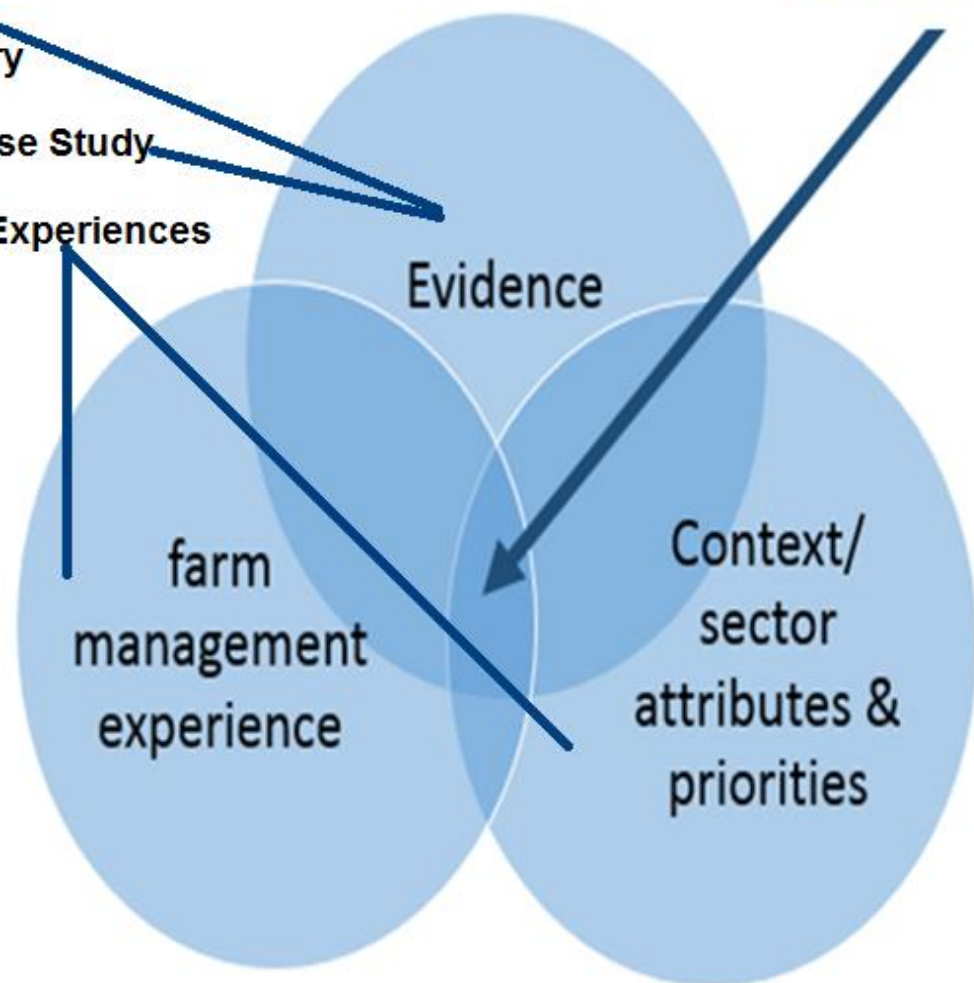


Scientific Trials
(Clinical/Laboratory)

Demonstration/Case Study

Practitioner/User Experiences

EBA





Examples of resources that work

- Needs to be provided in accessible and systematic format:
 - Cochrane and Campbell Collaborations
 - Conservation Evidence
 - Agricultural Research Centres such as Rothamsted
 - GRDC resources



Get involved to start sharing trial research information

Researchers and organisations interested in sharing farm trial information with Online Farm Trials to help improve productivity and sustainability in the Australian grains industry, please complete and submit the expression of interest form.

Get started

Share data

Trial Explorer

Enter keywords

Search filters

1993 TO 2015

Wheat x

Soil amelioration x

Contributor

APPLY FILTERS

RESET FILTERS

Region



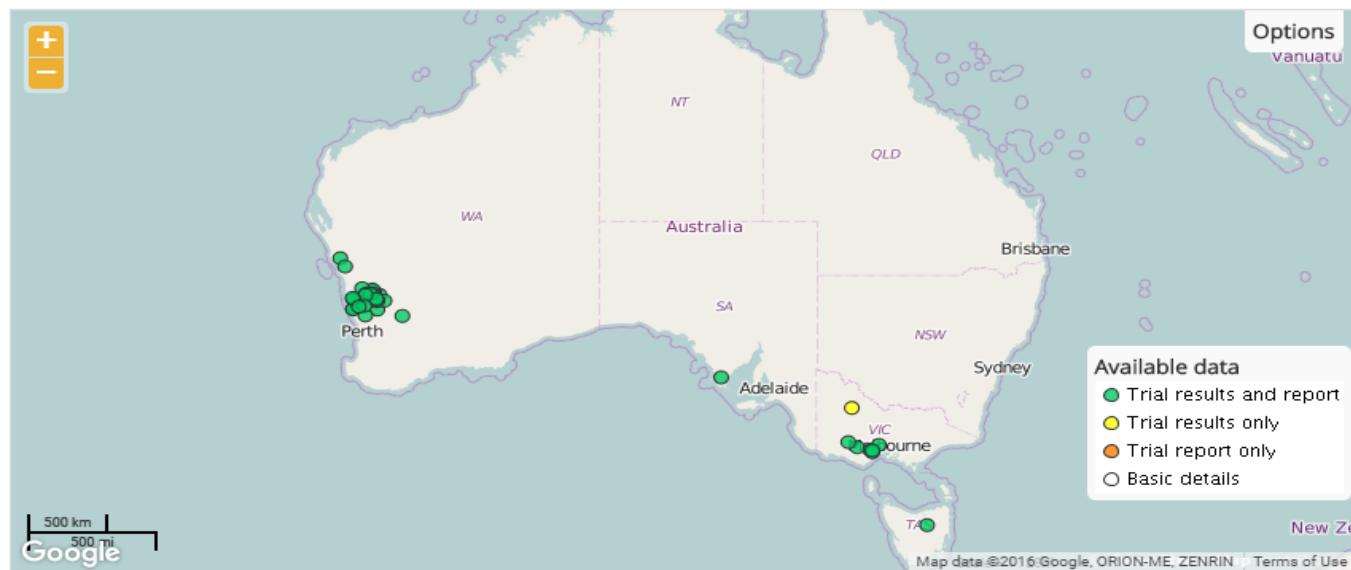
Refine results

Any treatment type

Crop: Type

Crop: Rotation

Fertiliser: Type



65 results found matching the current search filters and located within the visible map area.

Export

Save/share

Charts

Toggle map

Filters

Sort

Extension of amelioration methods to address non-wetting soils in Albany and Kwinana West zones: Erin Cahill - On-farm results summary

Erin Cahill (AgVivo) and CSBP field reserach

2014

Southern Dirt

Site 2, Dandaragan, WA

Fungicide x

Contributor

APPLY FILTERS

RESET FILTERS

In this example, investigation of trial research from other cropping regions may help inform local farm management decisions. This information may also provide ideas for future trial research. As a GRDC funded project, the primary focus of OFT is to capture GRDC funded trial research, however the OFT database accepts trial research from a range of sources.

While comparing trial research from different geographic locations is one benefit of the Trial Explorer, it also allows users to view changes over time at single locations. A search on Liebe Group filtered by trial site in the **'Filters'** tab shows a number of

trial projects for 'Site 4, Buntine WA'. While comparing trial research from different geographic locations is one benefit of the Trial Explorer, it also allows users to view changes over time at single locations. A search on Liebe Group filtered by trial site shows a number of trial projects for 'Site 4, Buntine WA'. Reviewing the trial project documents from this site shows the soil pH ranged from 5.1 to 6.34 over the last 15 years. Trends in other attributes such as grain yield, leaf disease rating and plant density can also be seen by using the scatterplot charts in the **'Charts'** tab of the Trial Explorer results page.

As another local example, historical soil health research by Liebe Group can be identified by searching on **'Soil amelioration'** as the treatment type and **'Liebe Group'** as the contributor. This refines the more than 3,000 nationwide trial projects to around 50 soil health related trial projects in the Liebe Group region. These numbers will change as participation in the OFT project increases and new trial research is released.

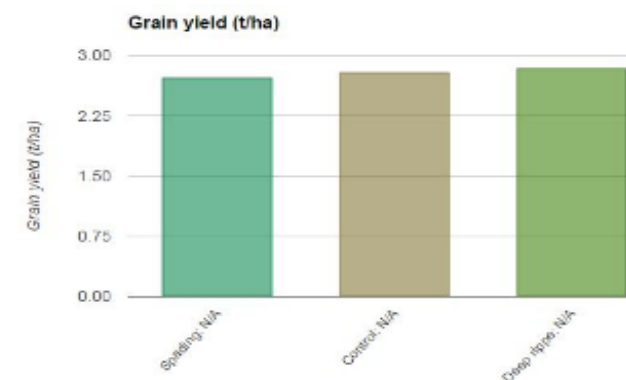
The OFT database can store results for a number of measurement types in each trial project. Because the Trial Explorer enables comparison between trial projects, it is important all treatment results are recorded for each measurement, not just those that are significantly different. This allows new discoveries to be made across trial sites. For example, while one crop variety may not have performed significantly better at particular site, the ability for the Trial Explorer to compare the same variety at different trial sites may highlight better performance in different soil types, climates or fertiliser applications.

Metric	LSD
Grain yield	0.33
Gross margin	N/A*
Plant density	37

Metric	LSD
Tillers @T1	72
Tillers @T2	84
Tillers @T3	67

Further considering the Liebe Group soil health example, grain yield is often used in farm trials as a determinant of treatment success. In the **'Filters'** tab above the search results in the Trial Explorer, selecting 'Grain yield' from the metric type filters removes trial projects that did not record grain yield. Result charts can then be viewed for the trial results in the **'Charts'** tab. While reviewing the list of results, irrelevant trials can be excluded where the information is deemed unnecessary. Once the list is refined, the data can then be downloaded in various formats by clicking the **'Export'** tab. This allows further analysis of data that may have come from a range of contributors on a common subject.

In the majority of the Liebe Group soil health related trials, results showed soil cultivation treatments had a positive effect on grain yield. In one trial where the uncultivated soil treatment yielded highest, a reading of the original trial report showed the trial was unreplicated and the results "should be interpreted with caution" (Mouldboard plough demonstration – Buntine 2012). Harvest hand cuts in this trial actually showed mouldboard plough treatments yielded higher. This demonstrates the value of including supporting research documents in the Trial Explorer.



The examples described above provide some information of how federating nationwide farm trial research can help provide information for farm management decision making. Those interested in using OFT can find the research applications and supporting user information at www.farmtrials.com.au

OFT has been developed by the Centre for eResearch and Digital Innovation at Federation University Australia with funding from the Grains Research and Development Corporation and the assistance of Liebe Group and other research contributors.

Emerging evidence of primary impact:

- Value legacy data in informed decision making
- Building a repository of trial information
- Simplified system for maximum access capacity
- Minimisation trial duplication.

Next Steps

- Data discovery work by CeRDI researchers increasing evidence strength & comparability
- Building researcher, agriculturalist and grower group collaboration

Approaches

Linear (input/output):

- In sector education
- Coercion (Regulations, law)
- Incentives (Economic benefit & sanctions)

Integrated:

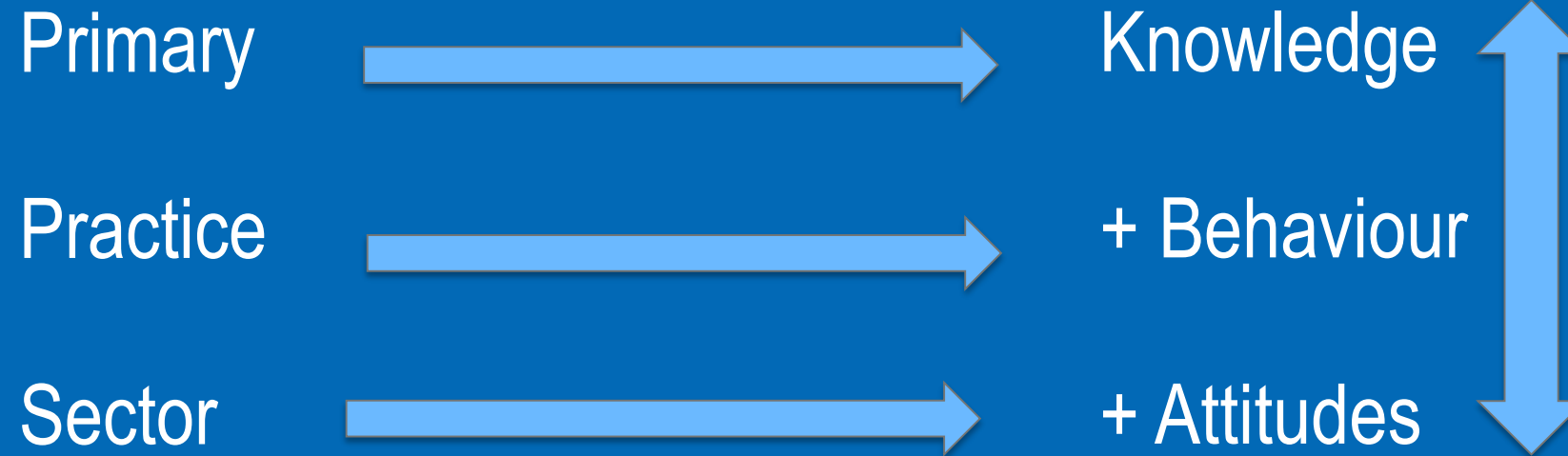
- Extension education
- Networking & collaboration
- Decision support

Layer 2

Measuring and broadening the impact across multiple points



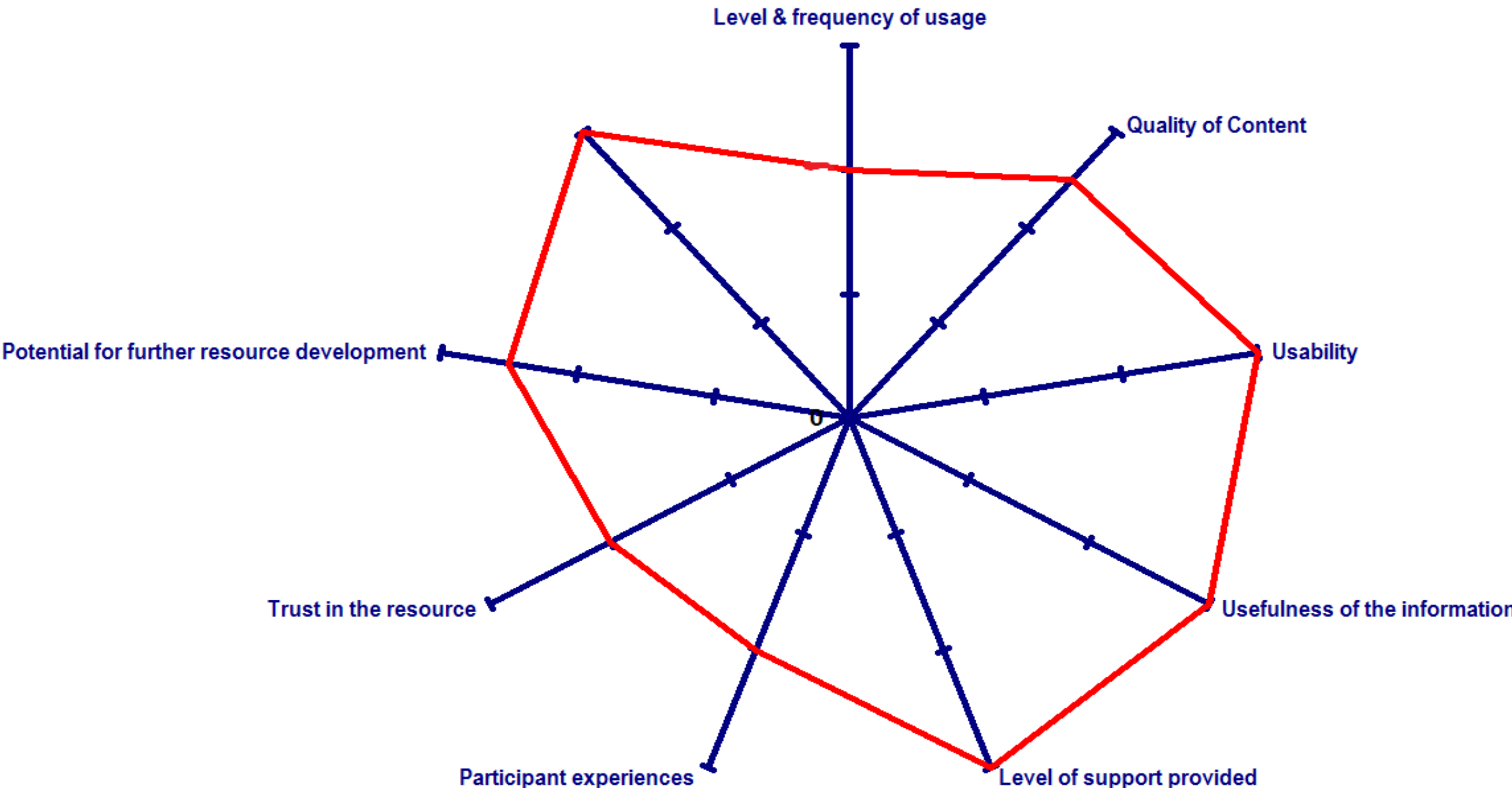
Impact levels and determinants



Potential Tools to support process

Areas to test

Surveys	Level & Frequency of use
Brainstorming sessions	Quality
Online feedback	Usability
Photos	Level of support in adoption
Document analysis	Participant experiences
Interviews/focus groups	Level of trust
Session feedback sheets/discussion	Potential further development
Observation or journals	Usefulness of information



Key Summary Points

- Building evidence base critical for sector development
- Impact can be measured
- Different levels of impact
- Agriculturalists central in the process