



MAP OF AG



British Geological Survey



# Facilitating on farm trials



Innovate UK

Project 10004348

[www.farmpep.net](http://www.farmpep.net)



# Agenda

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1. Innovation models
2. What are on-farm trials?
3. Top tips
4. Real cases
5. Discussion



# Innovation models



**Technology Transfer**  
Experts define desired result

**Production process (market)**  
Client defines desired result  
*(Funding agency defines desired result)*

**Project**

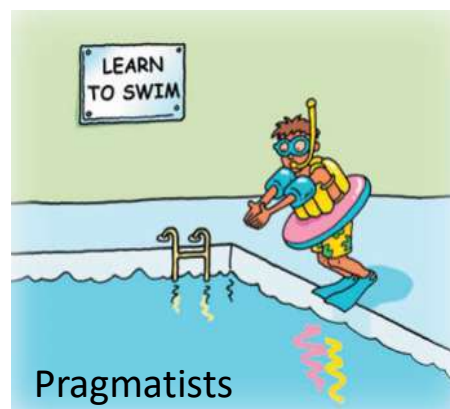
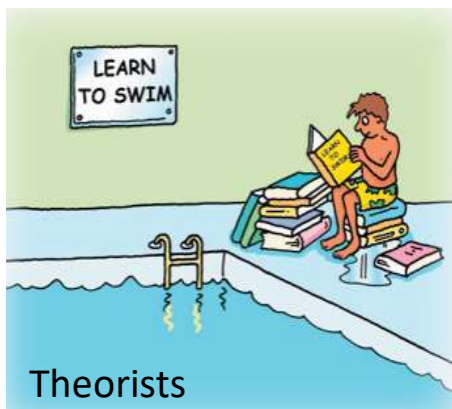
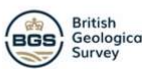
**Discovery journey**

**Interactive innovation process**  
Initiators define shared ambition



Knowledge generation and dissemination	Actors involved agree on:				In other words...
	Problem	Target	Solution	Implementation	
<u>Knowledge transfer</u>	Yes	Yes	Yes	Yes	Info transfer for known problems, solutions and implementation
<u>Knowledge exchange</u>	Yes	Yes	Yes	No	Sharing knowledge, working out implementation together
<u>Co-Creation</u>	Yes	Yes	No	No	Joint search for solutions and implementation, interdisciplinary
<u>Co-Emergence</u>	No	No	No	No	Creating a participatory basis for Problem identification and solutions

# Learning models



Learning Style	Type of Learner	Learning preference
Activists	Hands on	Trial and error
Reflectors	Tell me	Briefed before proceeding
Theorists	Convince me	Clarity - Does this make sense?
Pragmatists	Show me	Likes an expert to demonstrate

Image adapted from : [Learning Styles by Jon Rosewell](#)

[https://www.open.edu/openlearn/ocw/pluginfile.php/96185/1/mod\\_resource/content/1/Learning%20style.pdf](https://www.open.edu/openlearn/ocw/pluginfile.php/96185/1/mod_resource/content/1/Learning%20style.pdf)

# Learning together to innovate together

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## Social Learning

- “...emerges through practices that facilitate knowledge sharing and co-creation of experiences between stakeholders around a shared purpose” (Ensor and Harvey, 2015)

## Process designed towards:

- New shared ways of knowing
- New relationships between stakeholders
- Changes in practices

# Benefits and challenges



Benefits	Challenges
Derisk testing ideas	
Farmers are knowledge creators, not just users: <ul style="list-style-type: none"> <li>• Innovations are not always practical, simple or easy to use</li> <li>• Innovations have created different kind of work / more work!</li> </ul>	Need to involve all participants in an interactive manner from the start: it takes time!
Developing better tools and research methods that work in the real world	Need for a good structure from the start; <b>less is more!</b> And a good understanding of the tools you'll need for the trial and to measure and analyse results → <b>support from experts</b>
Customised understanding rather than “one size fits all” / innovate in context!	Communicate properly how the trial will be, what data needs to be collated and prepare for any challenges Understand the baseline conditions!
Integrating research skills into every day farming practices	Need to support participants to make sure the data created and collected is the right one
Strengthen relations	Building trust takes time
Group learning > group sharing > better KE > open source > proliferation of project outcomes	Finding effective ways to share results: farm visits, in person or online meetings, conferences/events. <b>THIS IS CRUCIAL!</b>

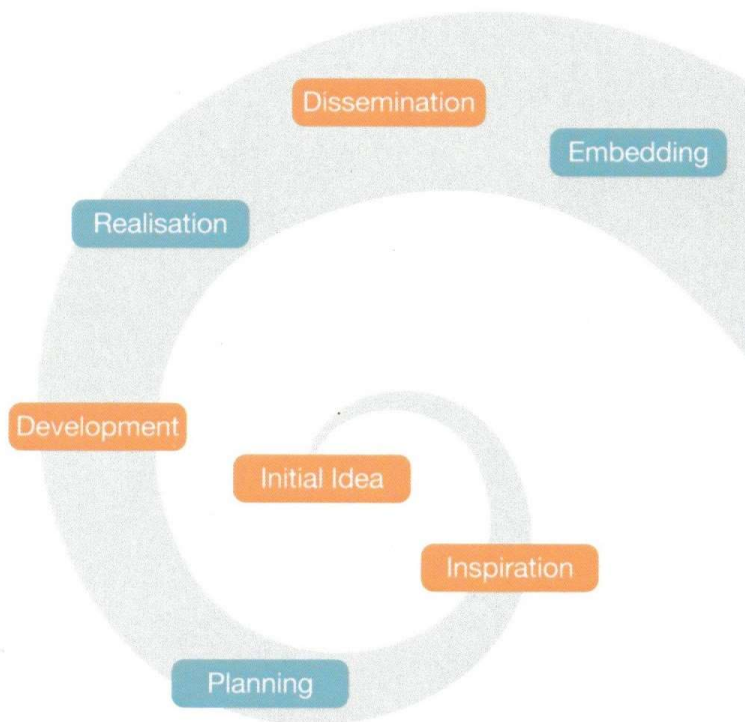




# Stages



## Spiral of Initiatives



● Warm process needing attention    ● Cold process needing attention



# 5 principles for success



## 1. Collaboration:

- Identify common ideas & goals
- Find collaborators and take the time to get to know them → *neighbours, topical groups, agronomists, other groups (for example, IF, ADAS, AHDB)*
- Come together to discuss ideas → in person is always great, but not always possible *some tools: Zoom, Menti, Miro, Typeform*
- Agree on a simple question you'd all like answered
- Share your plans & find out if it has been researched!

## 2. Keep it simple

## 3. Underlying variation

## 4. Replication

## 5. Assessments



# 5 principles for success

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## 1. Collaboration

## 2. Keep it simple:

- Agree on a simple question you'd all like answered but try **bold** ideas → to make sure you can see the differences!
- Design a trial based on a **simple** treatment/practice
- Share your plans & find out if it has been researched!
- Make sure you have the right equipment, fields and **attitude** to make it happen

## 3. Underlying variation

## 4. Replication

## 5. Assessments

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# Things to consider



Participants pinch points schedule-wise & busy-ness wise

The right space & tools

Facilitation – keeping it all moving

Facilitation: create a plan!

Keep communicating through the process

Trust is crucial

Focus on real on-farm priorities

Environmental conditions

Source the right knowledge to make sure what you are testing is tested right!

Simple administration and peer review process

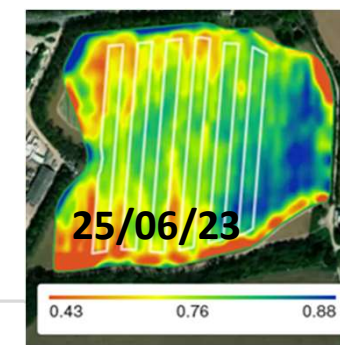
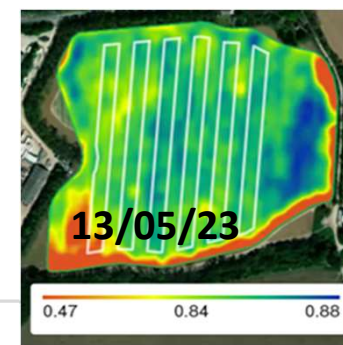
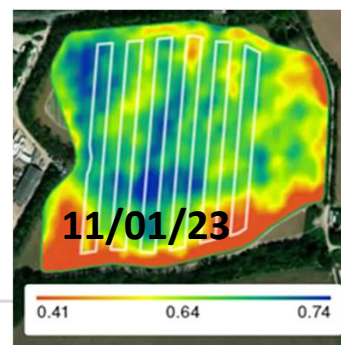
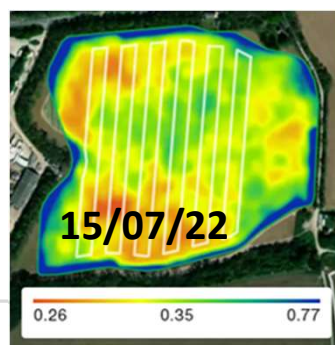
Practical advice on what has worked

Communicate results and talk to others → someone else might have done it and you can test ideas

# What we have done in FarmPEP



2022	2023
5 comparing N rates	Blue N in sugar beet
2 testing Utrisha N	Horsch vs Vaderstad drills in WW
2 trials testing Didin with liquid N and N timings	Horsch vs Kverneland drills in WW
1 trial testing biostimulants	Yara crop lift
	N reduction & substitution with biologicals
	Nitrogen tramline trial
	Nutrino @ T2 or T2 + T3 versus farm control
	LCBF Boost in conjunction with N reductions
	WW with/wo Clover understory & N reductions / &QLF boost & N reductions



# Main learnings

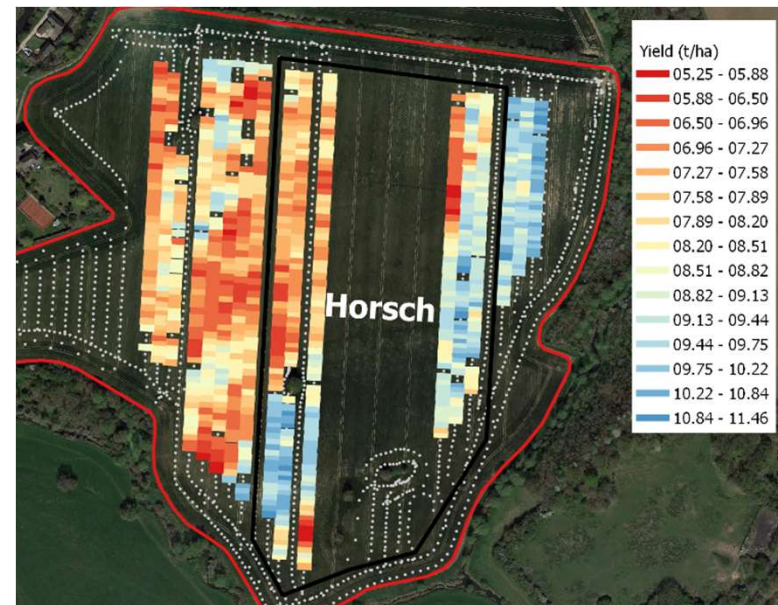
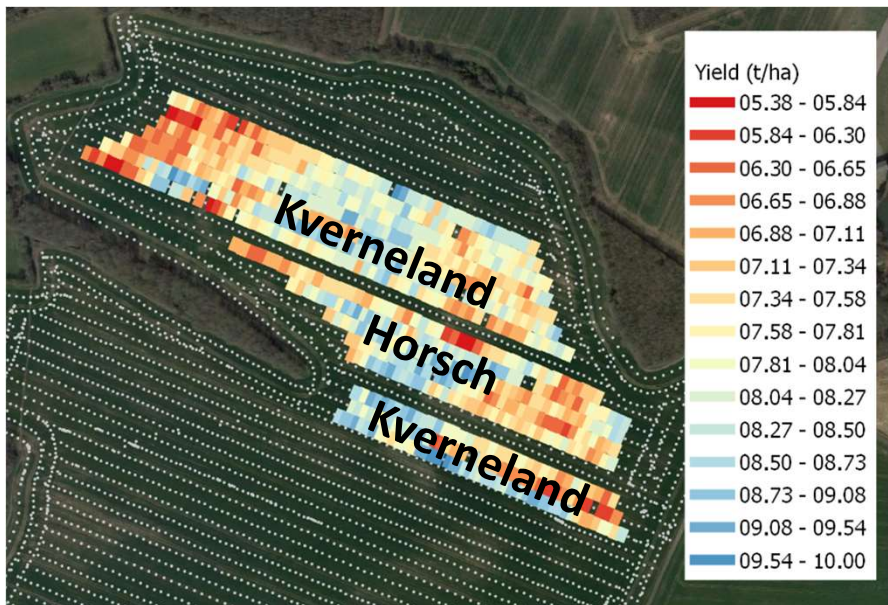


- Keep it simple!
- Get a clear benchmark to test against, considering what will you be comparing and what tools will you use to do that: yield maps, for example, where a great tool this season, are there any others you'll be using?
- Understanding the baseline conditions, and finding the right time to measure them
- Make sure you choose the right field for your trial from an operating standpoint: last year some trials were developed in fields that resulted in operational difficulties (longer tramlines than ideal, for example)
- Make sure the trial you think of and the tools you'll use to assess information aligns with your operations and the machinery/tools you'll use to collect data.  
*Pro tip: the results are not necessarily better if you have more data points*
- Consider time & availability if you'll be testing specific product / practice
- Repeat tests consistently to test variation between seasons: last year conditions were unique, how would the results change in a year with "normal" conditions?
- Boldness in testing is **not** necessarily a good thing or a requirement! Last season trials, for example, tested reasonably bold N reductions: if gone further, you could have risked a significant yield there and (since they are tested in bigger areas) impact your business results. And you are running businesses!
- Trial results delivery: farmers got the most complete information from a combination of individual reports **and** a session with experts explaining the individual results and threading them across to create a seasonal picture of results and derive conclusions. The report was interesting but some of it was a bit confusing, so having someone interpret the data and walk the farmers through it was very welcome

# Main learnings



Plans received so far show improved trial designs on 2022: more replication & fewer treatments

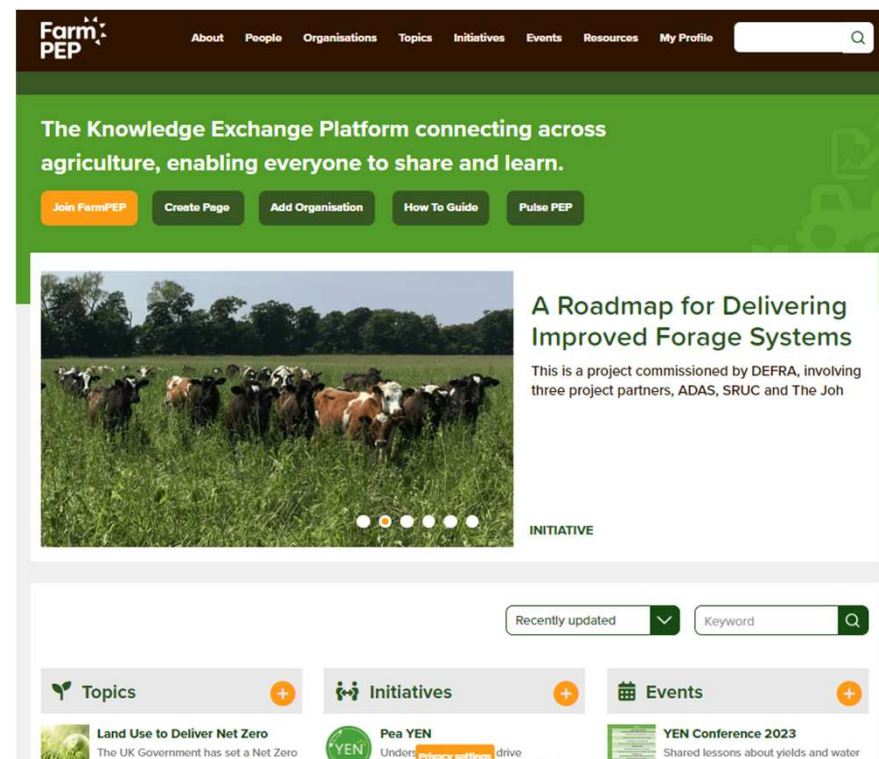




# WP1 www.FarmPEP.net online



- 962 Members currently signed up
- 222 Organisations
- 262 Topics
- 190 Initiatives
- 313 Resources
- 9200 unique user IDs over 3 months
- Updated home page with promoted content
- FarmPEP featured farmer questions
- PulsePEP launched







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*Agronomics*

