

# Farmer knowledge to inform NFM

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# Outline

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- What we said we would do
- What we found out
- What we do next



# What we said we would do

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- Evaluating the effectiveness of land-based NFM measures to:
  - increase infiltration, evaporative losses and below-ground water storage
  - ⇒ reduce flood risk in the West Thames.
- WP1 local (including farmer) knowledge to help our understanding of flood risk and land management practices.
- Aim is to inform policy, improve decisions, deliver co-benefits for local communities across West Thames

## Over the last 2 years we have ...

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- Sought the views of farmers across the West Thames
- Had stands at Groundswell 2019 and ORFC 2020
- Collected soil samples from 20 farms in West Thames

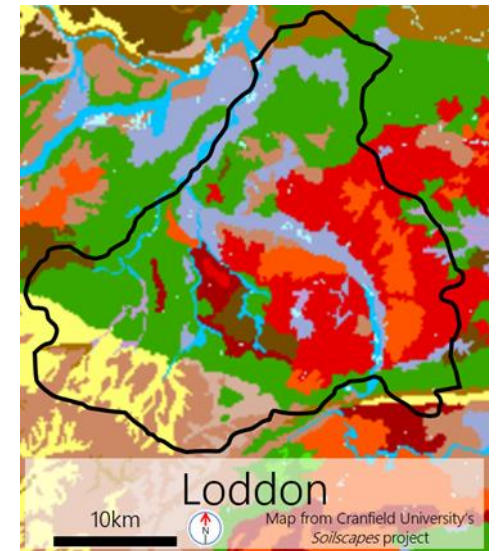
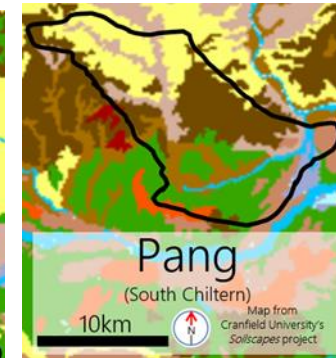
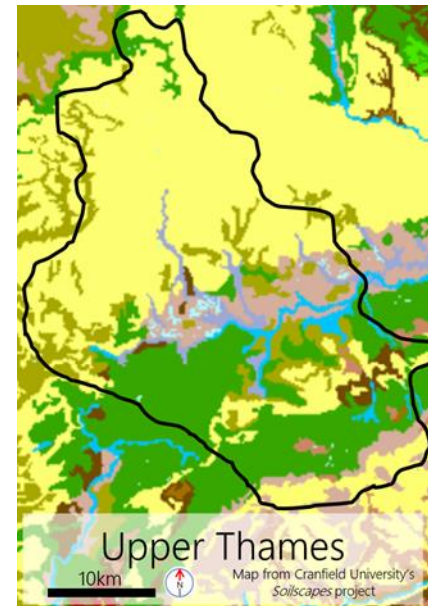
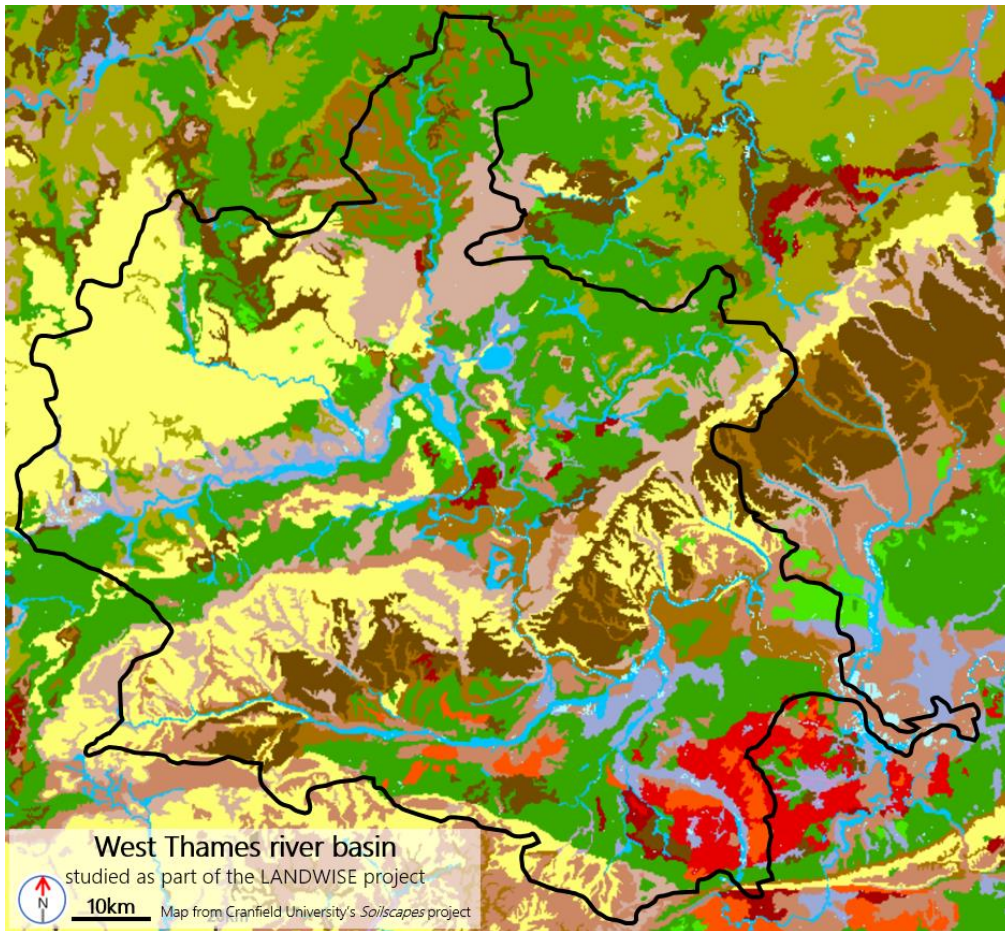
... Some farmers also attended the workshops.

# What we found out

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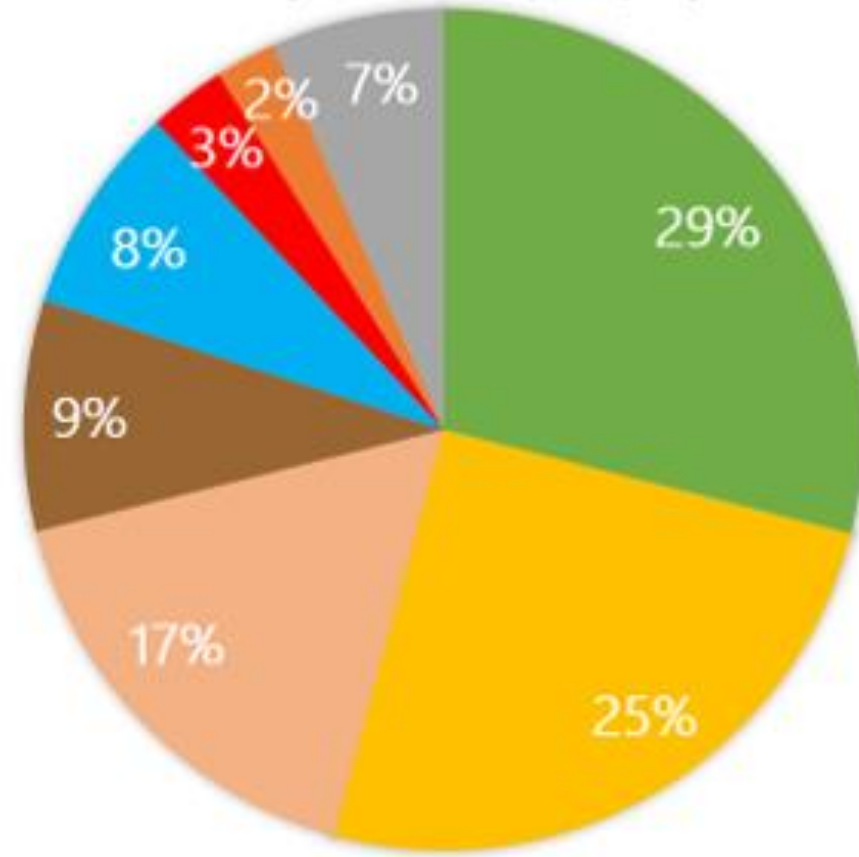
- The importance of soils
- A range of farming practices
- Diverse range of views and willingness to engage
- Farmers are diverse and reflect wider range of thinking

# Soils at the heart of things



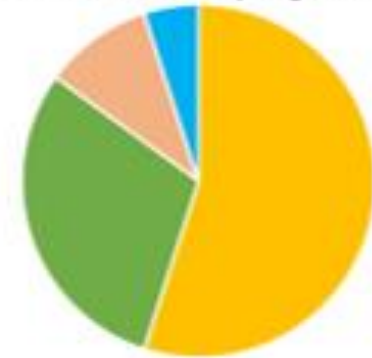
- |                                                   |                                                              |                                                                |                                                                                       |                                                                              |
|---------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| 1 Saltmarsh soils                                 | 7 Freely draining slightly acid but base-rich soils          | 13 Freely draining acid loamy soils over rock                  | 18 Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils | 23 Loamy and sandy soils with naturally high groundwater and a peaty surface |
| 2 Shallow very acid peaty soils over rock         | 8 Slightly acid loamy and clayey soils with impeded drainage | 14 Freely draining very acid sandy and loamy soils             | 19 Slowly permeable wet very acid upland soils with a peaty surface                   | 24 Restored soils mostly from quarry and opencast spoil                      |
| 3 Shallow lime-rich soils over chalk or limestone | 9 Lime-rich loamy and clayey soils with impeded drainage     | 15 Naturally wet very acid sandy and loamy soils               | 20 Loamy and clayey floodplain soils with naturally high groundwater                  | 25 Blanket bog peat soils                                                    |
| 4 Sand dune soils                                 | 10 Freely draining slightly acid sandy soils                 | 16 Very acid loamy upland soils with a wet peaty surface       | 21 Loamy and clayey soils of coastal flats with naturally high groundwater            | 26 Raised bog peat soils                                                     |
| 5 Freely draining lime-rich loamy soils           | 11 Freely draining sandy Breckland soils                     | 17 Slowly permeable seasonally wet acid loamy and clayey soils | 22 Loamy soils with naturally high groundwater                                        | 27 Fen peat soils                                                            |
| 6 Freely draining slightly acid loamy soils       | 12 Freely draining floodplain soils                          |                                                                |                                                                                       |                                                                              |

Soil types distribution on the whole West Thames river basin according to *Soilscapes* project



Details of soil types distribution within the three catchments which have NFM projects

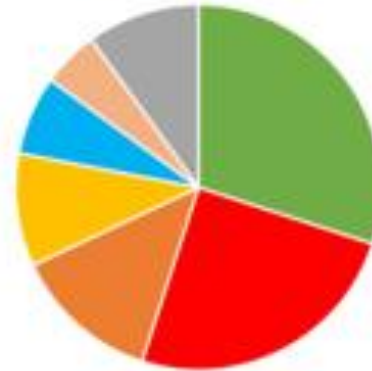
Upper Thames



Pang

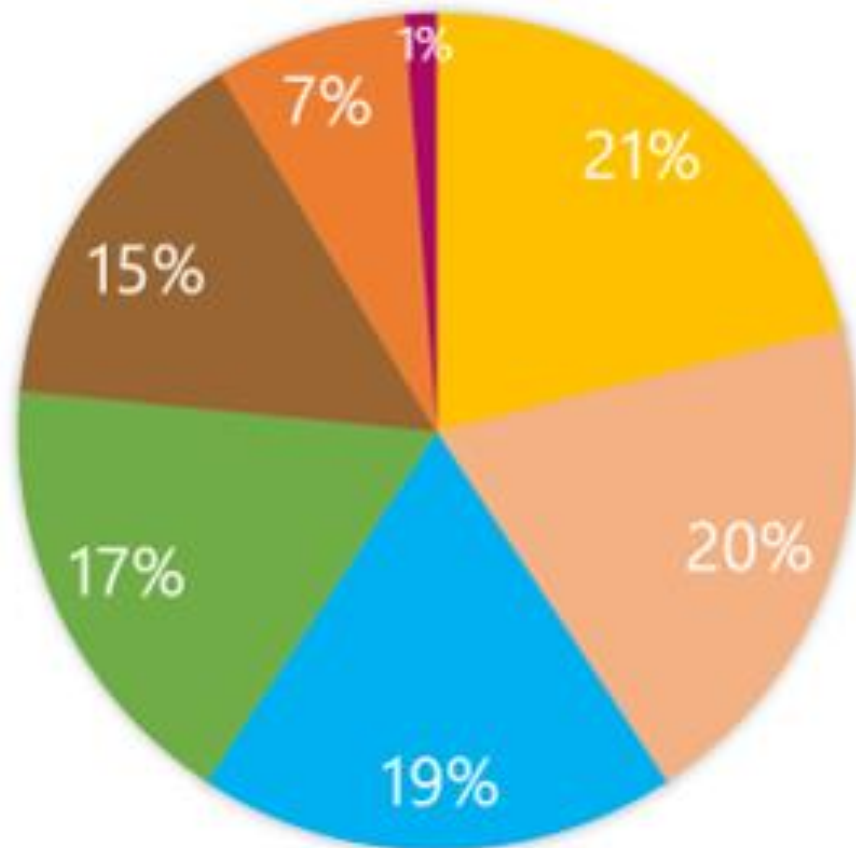


Loddon

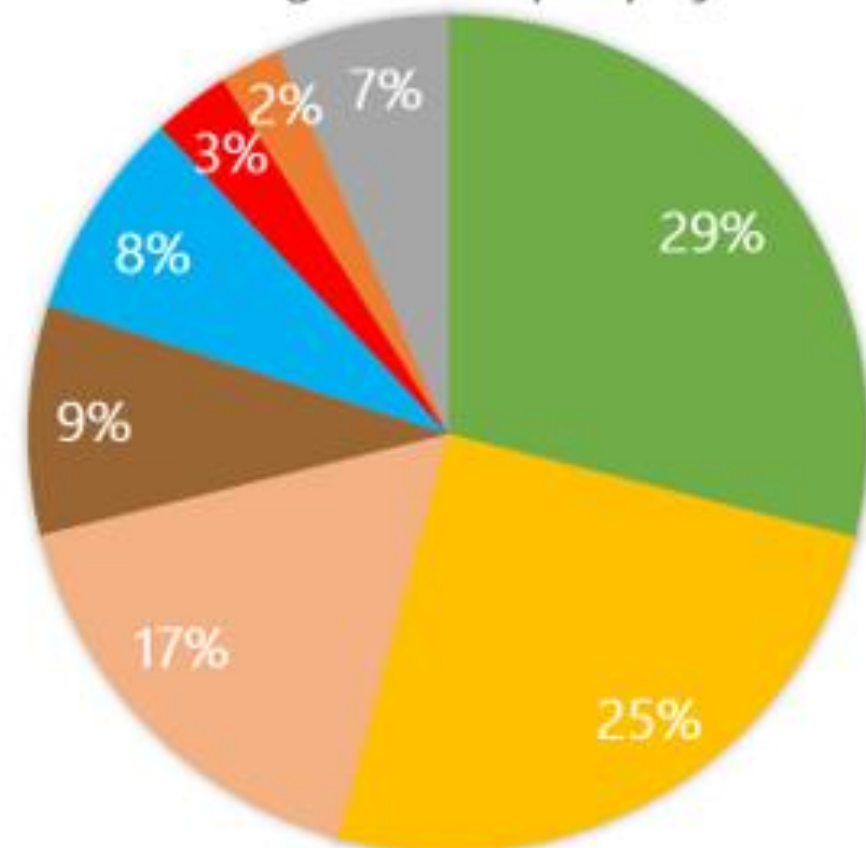


### Soil types distribution according to farmers

Answers to question 2: "What soil types do you have?"



### Soil types distribution on the whole West Thames river basin according to *Soilscapes* project





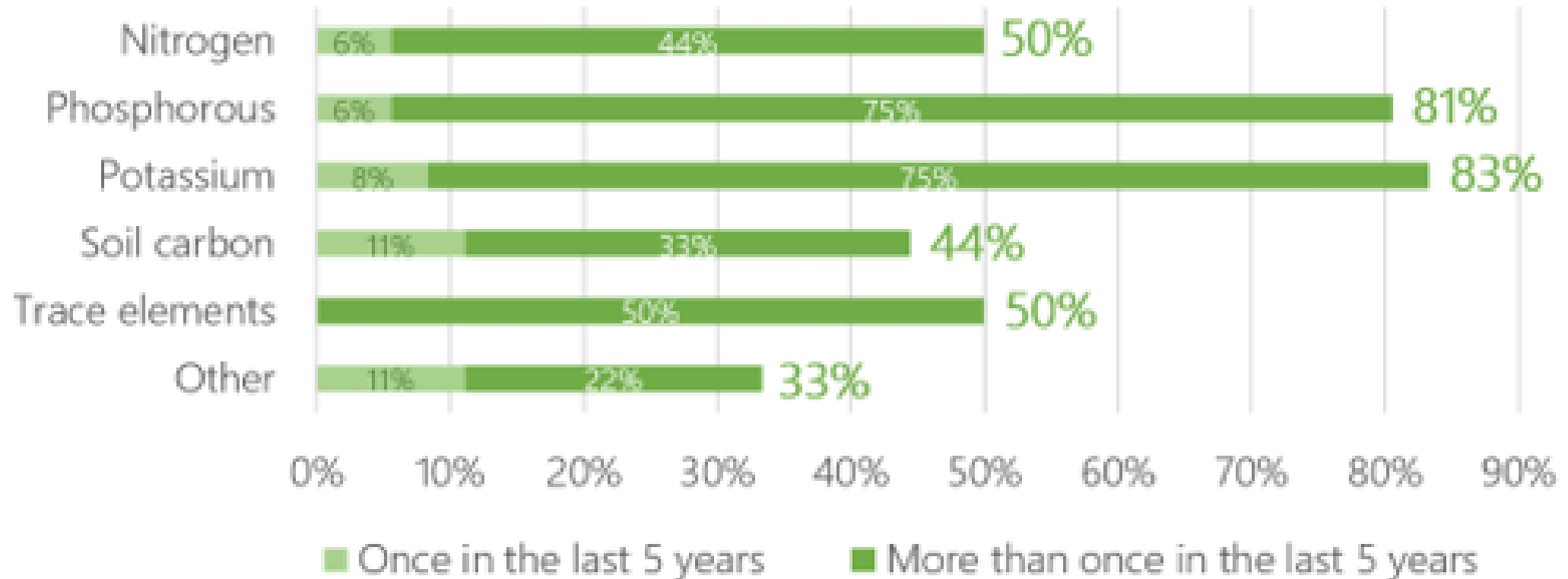
# Views on soil management

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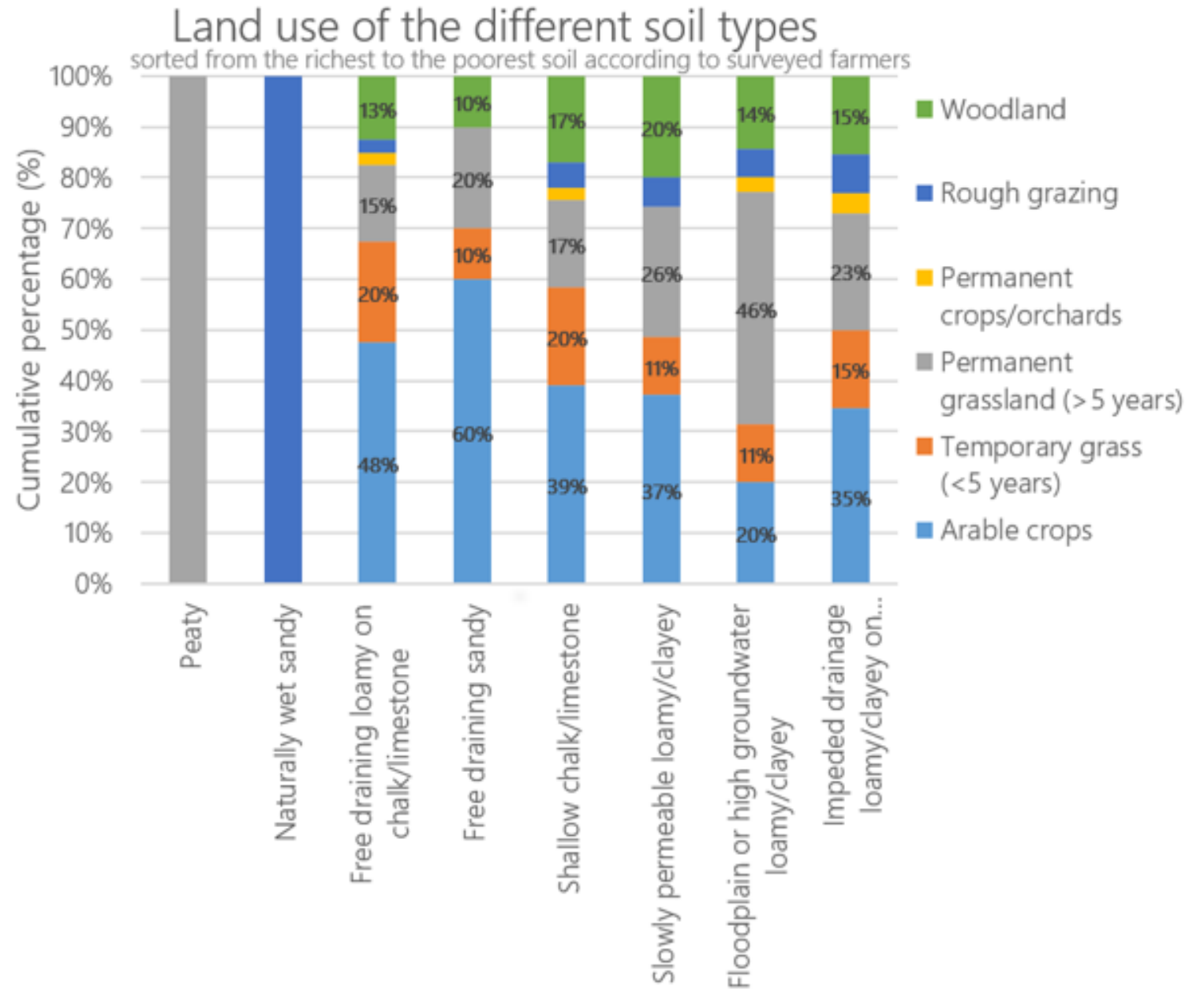
- Is it worth investing in good soil structure?: **Yes 92%**
- SOM helps me access fields more quickly: **Yes 58%**
- Do you try to improve your SOM?: **Yes 94%**
- Each year to do something to help SOM: **Yes 89%**
- Is soil testing useful: **Yes 83%**
- Cover crops part of my rotation: **Yes 28%, Undecided 44%**

# Soil testing

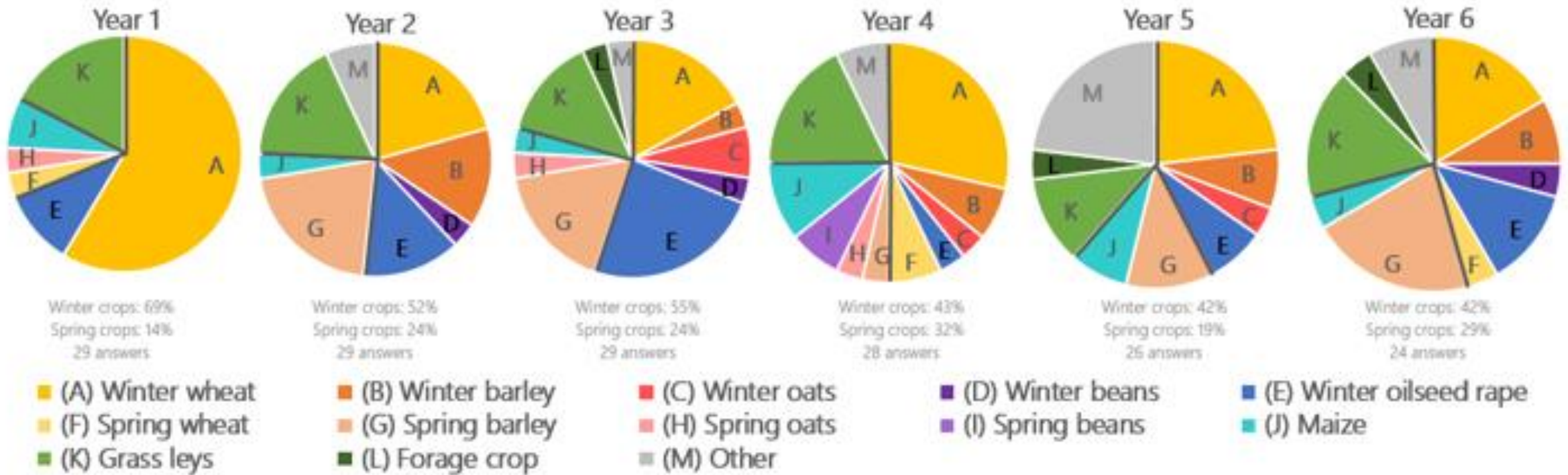
Soil tests implemented by farmers



# Land use

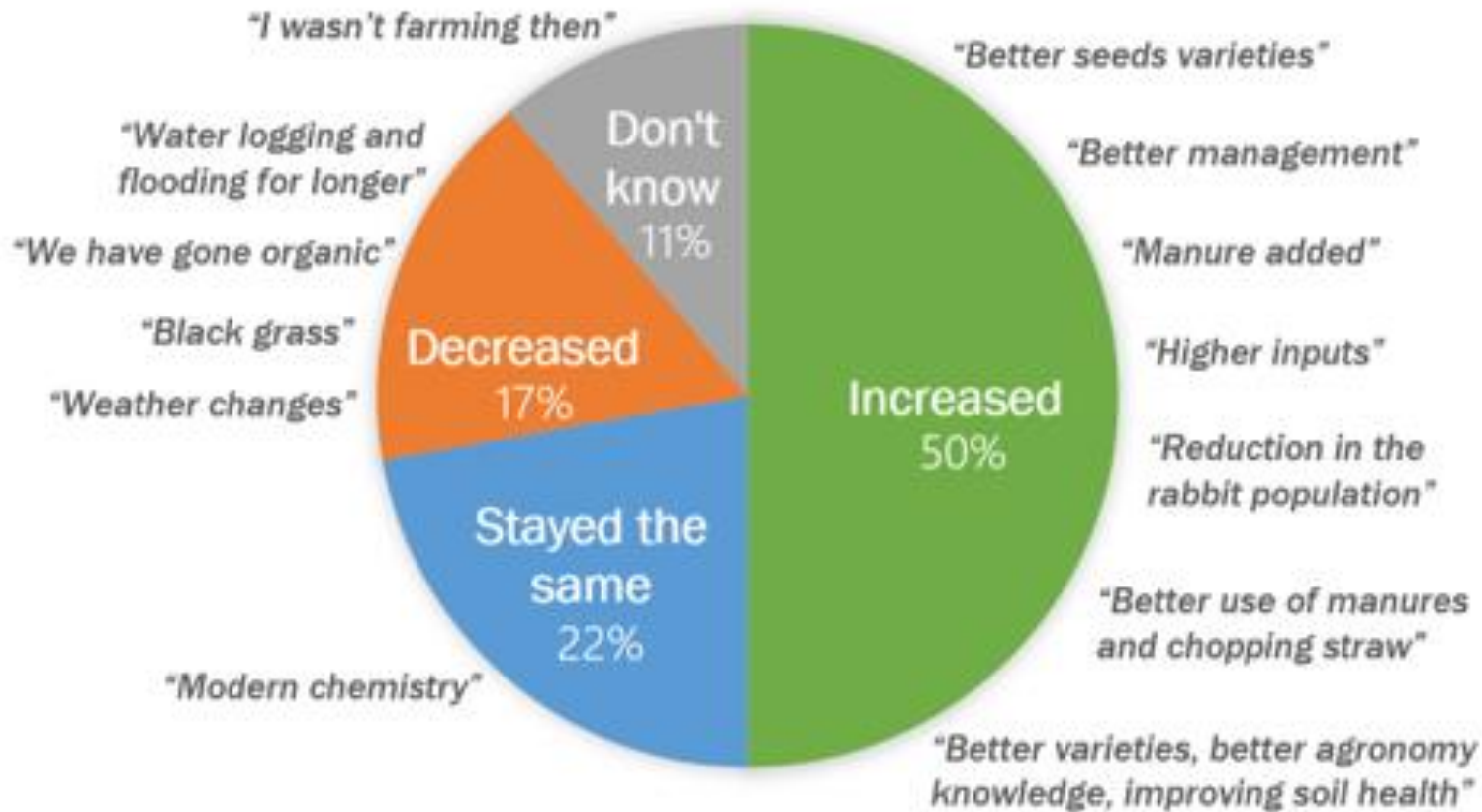


# Arable rotations



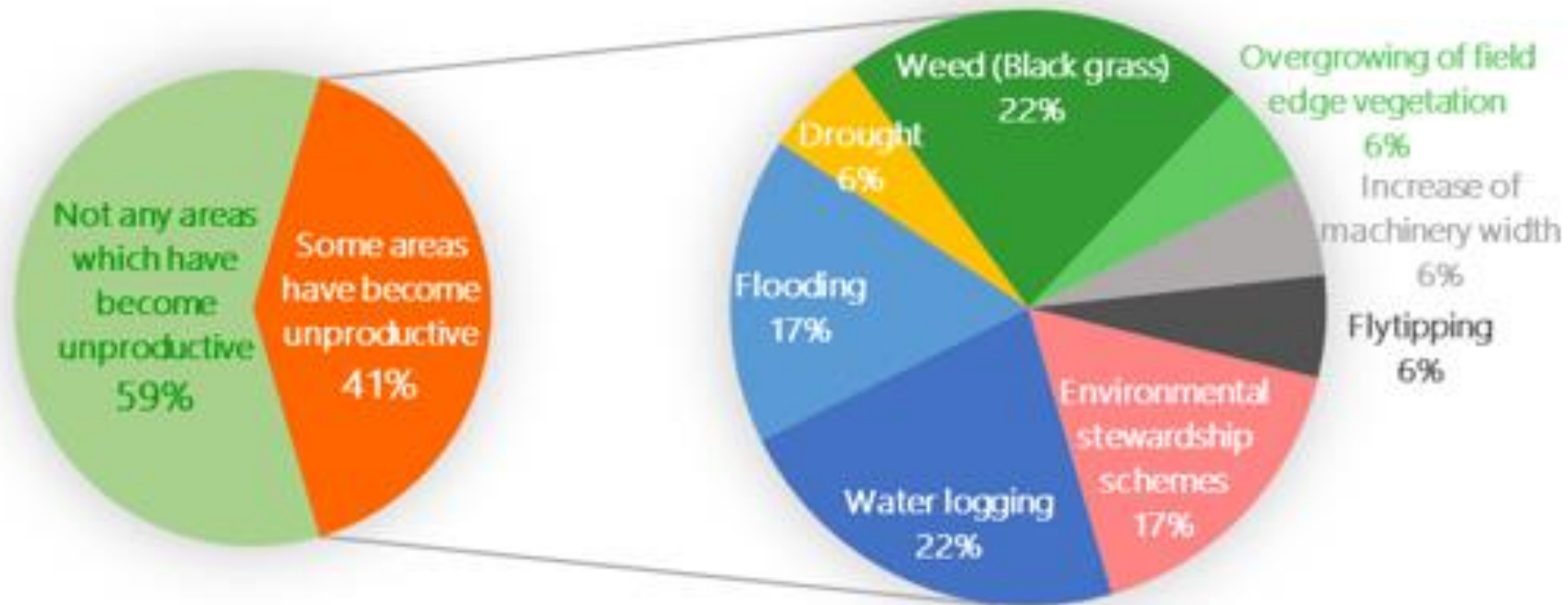
# Compared to 20 years ago ...

Compared with 20 years ago, yields have:



# Some unproductive areas

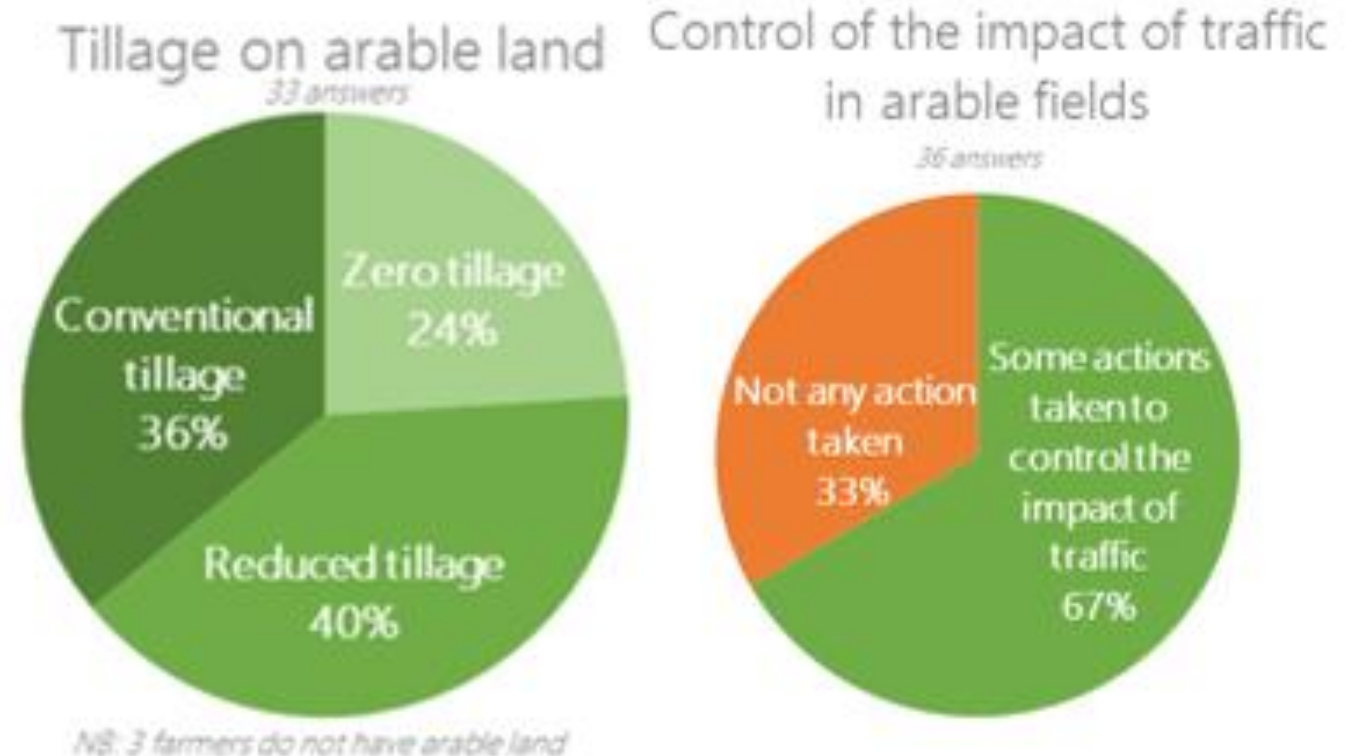
In the last ten years, are there any areas of your farm which have become unproductive or unusable?



# Willingness to change

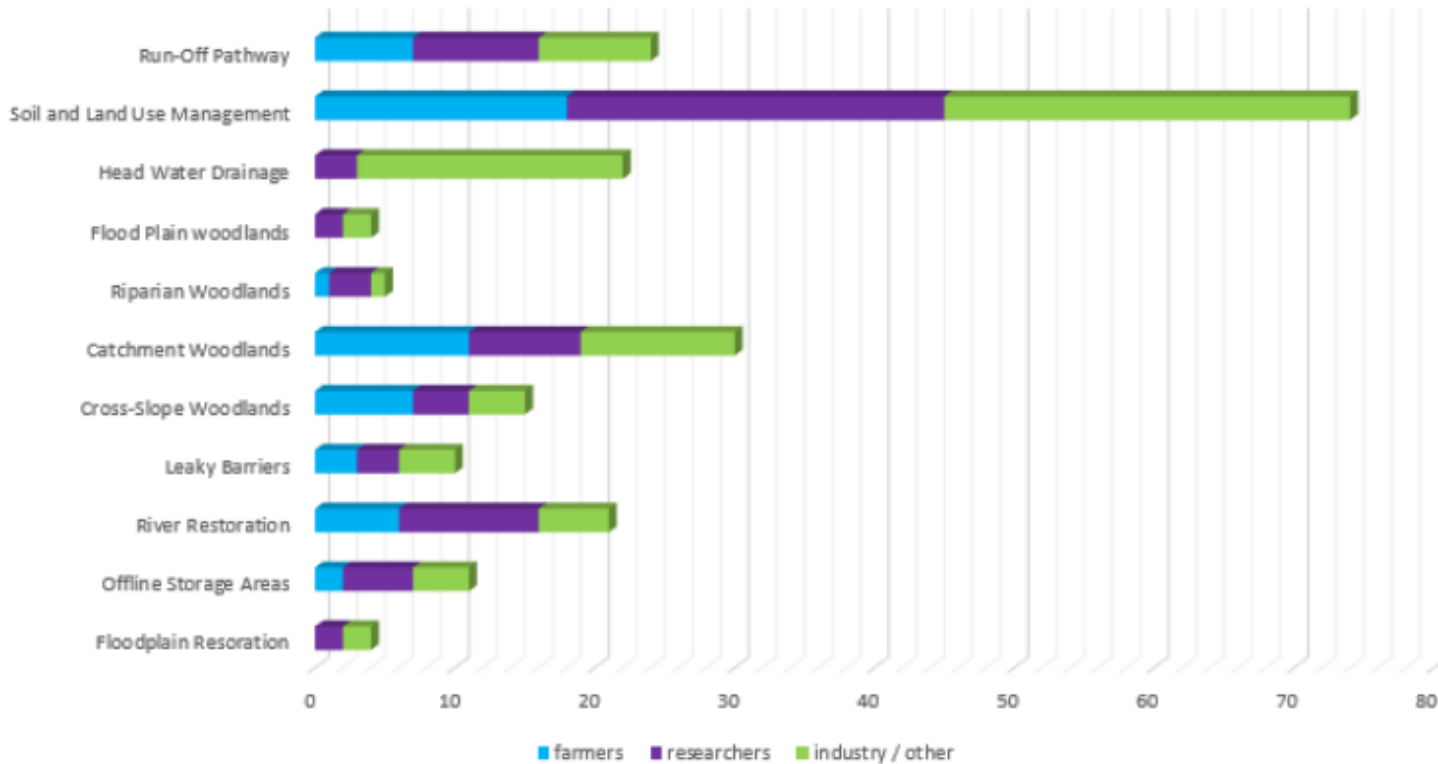
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- 64% considering significant changes
- 61% consider advice very/fairly important

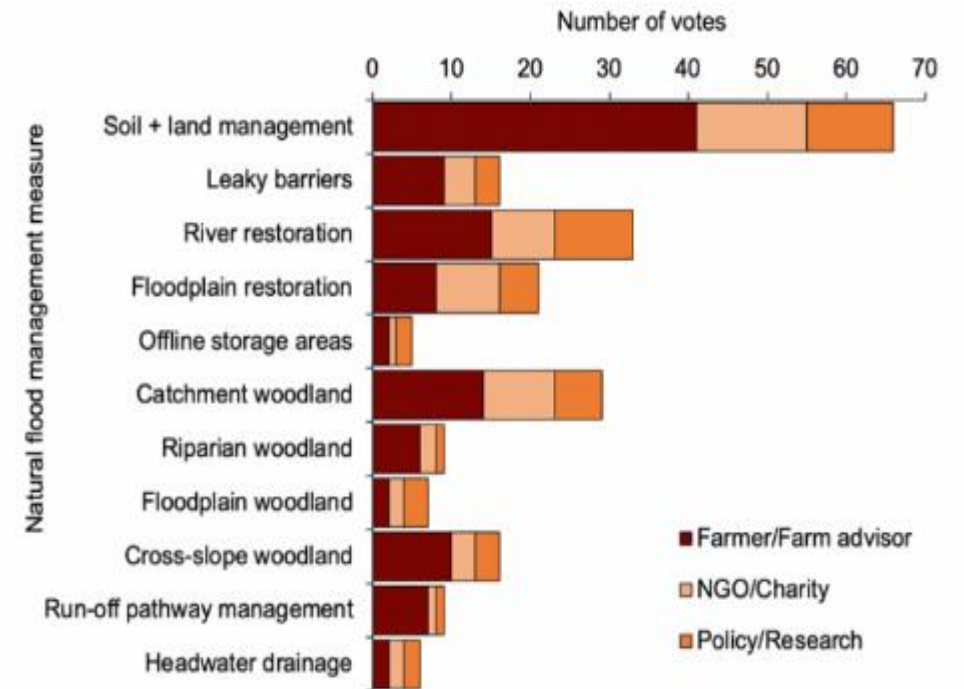


# Farmers not so out of step

NFM Measures Preferences  
Groundswell2019 attendee 'votes'



Oxford Real Farming Conference 2020





# What we do next

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- Interviews with farmers in West Thames (Feb & Mar 2020)
- Further views from farmers in West Thames (Mar 2020)
- Draft report on agri-policy to inform thinking (April 2020)
- Develop and test scenarios (Spring onwards 2020)
- Continue the dialogue ...

Thank you.  
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