

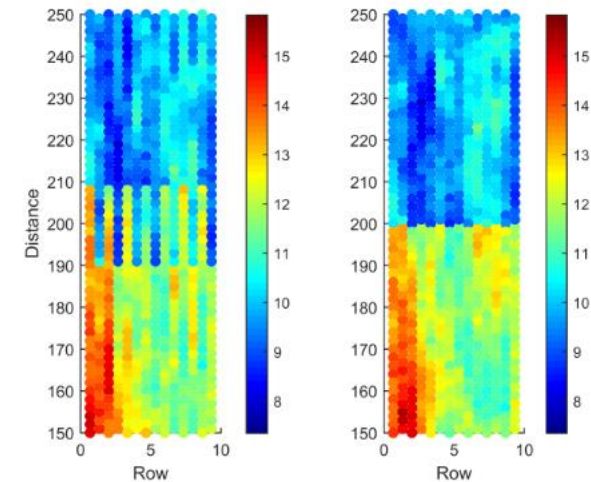
Agronomists' Induction 2019

# How to measure the impact of soil management practices using a soil health scorecard

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## Integrated programme of research and knowledge exchange

- Rotations
- Cultivations
- Compaction
- Organic matter
- Soil nutrients
- Cover crops
- Soil biology
- Soil health
- Precision farming









Unearth a wealth of information on  
soil management at  
[www.ahdb.org.uk/greatsoils](http://www.ahdb.org.uk/greatsoils)



# Why is soil management important?

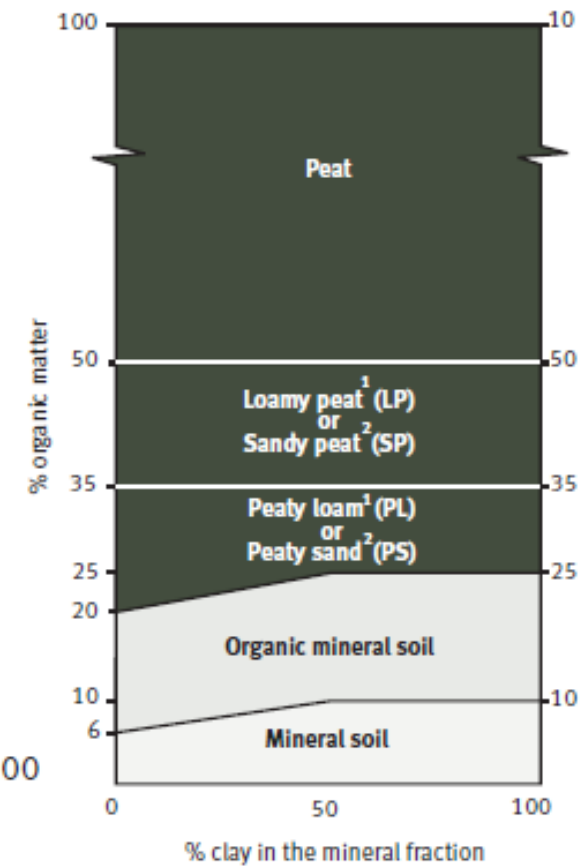
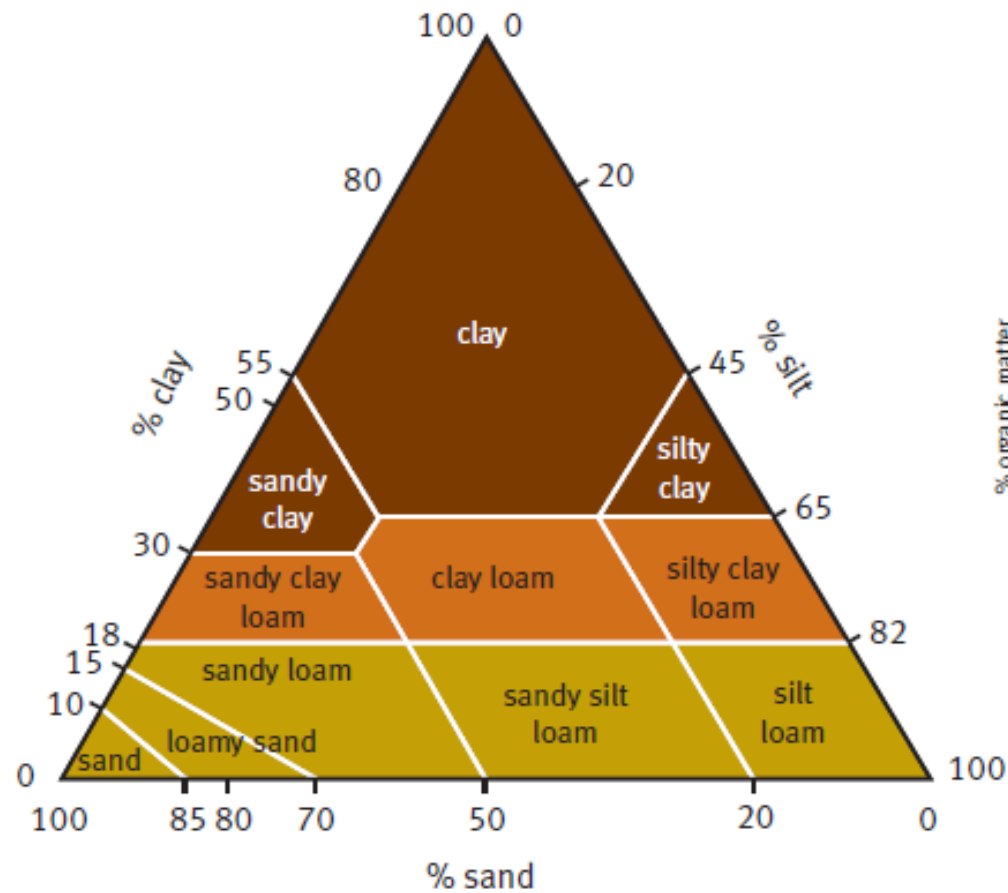
Discussion



# All soils are different



Soil texture classification for mineral soils, and  
for soils with high organic matter



<sup>1</sup>Less than 50% sand in the mineral fraction

<sup>2</sup>50% sand or more in the mineral fraction

Credit: Think Soils,  
Environment Agency

## Physical

- Texture
- Structure
- Drainage

## Chemical

- pH
- N, P, K, Mg
- Minor nutrients

## Biological

- Earthworms
- Soil food web
- Microbiology



# Soil health scorecard approach

Developing indicators for measuring and monitoring soil health

Attribute*	Field A; Farm 1	Field B; Farm 2	Field C; Farm 3
SOM (%)	3.4	2	2.2
pH	6.7	6.9	7.0
Ext. P (mg/l)	40.6	59.6	37.2
Ext. K (mg/l)	158	106	148
Ext. Mg (mg/l)	82	89	144
VESS score	2	2	2
Earthworms (Number/pit)	13	8	1

Investigate
  Monitor
  No action needed



# Improve soil health by

- ✓ Increasing organic matter inputs
- ✓ Increasing rotation (length and diversity)
- ✓ Reducing tillage intensity, where possible



# Breakout session

Soil management issues on farm



# Scenarios

## Points of discussion

- What is the issue?
- What might have caused it?
- What could be done to alleviate it?
- What information do you need?

## Roles

- One AHDB facilitator per group
  - Help group keep on track
  - Manage time
  - Not to provide answers!
- One delegate to capture ideas
- One delegate to feed back at end

# Group feedback

Soil management issues on farm



# Farm A



## Farm B





## Farm C





# Farm D



# Farm E



# Practical look at soils

Soil types and scorecards

Soil biology









A vibrant landscape of a green field at sunset. A path leads from the foreground towards the horizon where the sun is setting, casting a warm glow over the scene. The sky is filled with colorful clouds, and the field is lush and green. In the background, there are rolling hills and a small village.

**‘Inspiring our farmers, growers  
and industry to succeed in a  
rapidly changing world’**