

# Improving soil biology for better yields

Improve your soil for higher yields • Gain environmental and economic benefits  
Build long term resilience into your farming system



## Designed for:

Individuals who want to improve the biology of their soils to achieve optimum and sustainable crop yields and understand the effects different farming practises have on the diversity of organisms and population sizes and how this impacts on crop production and margins

**Entry requirement:** **Accomplished** practitioner

**Price:** £225 + VAT

**Duration:** One day classroom-based course

**CPD points:** 10 BASIS points; 1 NRoSO point

## Learning outcomes:

**At the end of this course you will be able to:**

- Identify the benefit of soil biology on improving soil structure and fertility
- Recognise the impact of tillage on soil organic matter and soil biology and develop an appropriate strategy for the maintenance of soil biodiversity and understand the on farm, environmental and economical benefits it can bring
- Build fertility using soil organic matter, using different soil amendments, and take practical measures to maintain a sustainable soil ecosystem
- Use key indicators such as worms, soil structure and soil organic content as a measure of system performance and soil fertility

## Content:

**Classroom module 1** (half day):

- What is soil biology – its various components and the soil food web
  - Components of soil biology – microorganisms; insects; worms; plants; etc.
  - The soil food web
  - Biofilms
- The importance of Soil Organic Matter (SOM) to soil biology and how we can improve it
  - What is SOM and how we measure it
  - SOM and soil structure
  - Building SOM – gains and losses of SOM via management
  - Critical levels of SOM and its economic value
  - The '4 per mil' initiative

**Classroom module 2** (half day):

- The role and importance of soil biology
  - Key functions of SOM – control of pests and diseases; human health
  - The economic value of soil biology
  - Factors affecting soil biology; threats to soil biology and biodiversity
  - Tillage and soil biology
  - New opportunities to use soil biology in farming
- Measuring and increasing soil biological diversity on farm
  - Research approaches; sampling methods; practical on-farm approaches
  - Managing and increasing soil biological diversity
- Take-home messages and further reading

**Trainer:** Keith Goulding, Rothamsted Research



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Soil and  
Water