

Improving soil biology for better yields

Prevent yield loss due to compaction • Improve soil structure Save money, nutrients and fuel • Principles of control traffic farming

Designed for:

Individuals who would like 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 requirements:

An advanced course best suited to accomplished practitioners who want to implement the latest agri-tech research and knowledge on farm

Price:

£225 + VAT

Duration:

A one day classroom-based course

CPD points:

BASIS, NRoSO points applied for

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
- Understand the role of soil biology in driving nutrient cycling and how it plays a pivotal role within both the carbon (C) and nitrogen (N) cycles
- 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
- 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):

Why soil biology matters – soil biology in the overall context of soil health and crop production

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
- The role of fungi and the mycorrhizae
- Protozoa and nematodes
- Meso and macrofauna
- Research approaches; sampling methods;

Practical session: Identifying what is living in a soil sample and how soil composition influences this

Classroom module 2 (half day):

Role of soil biology in agricultural systems

- Soil biology and effects on soil structure
- The importance of the rhizosphere in plant nutrition and how it aids crop growth and yield.
- Improving overall ecosystem function

Impacts of agricultural management on soil biology

- Factors affecting soil biology; threats to soil biology and biodiversity
- Impacts of tillage
- Impacts of crops and rotations
- Impacts of organic materials (manures, biosolids, digestates)
- Impacts of inputs – pesticides, fertilisers

What can farmers do – changed practices, monitoring change.

- Measuring soil biological diversity on farm; practical on-farm approaches.
- Regenerative practices
- New opportunities to use soil biology in farming..

Trainers:

Felicity Crotty, Royal Agricultural University
Lecturer in Soil Science and Ecology