

Soil Health and Biology Certificate Program in Partnership with Soil Science Australia

Monday 14 July – Thursday 17 July 2025



The Soil Biology and Health Certification Program is offered in partnership with Soil Science Australia and is designed for growers and consultants in horticulture and agriculture who are interested in learning about the benefits of soil biology as a driver of healthy and sustainable crops, and the future directions for research, technologies, and practice. It is suitable for agronomists and advisors seeking to unlock new value from cropping operations.

Participants will learn about the properties of soils and how to adopt practices and strategies to enhance soil health and biological activities using the power of plant-soil-microbial relationships to unlock soil nutrients, produce healthier and more nutritious plants, and understand how microbes in soils influence soil fertility and drive plant production.

Presenters include soil health experts and soil researchers from Western Sydney University.

Course Structure

The 4-day Certificate Program is delivered in two parts:

Register by 30 June 2025
Limited positions
available

Part 1 – Day 1 & 2:

Introduction to Soil Health and Biology

The fundamentals of soil science: **core concepts** in soil biology and health.

Participants will be equipped with the foundational knowledge needed to sustainably increase productivity by integrating soil biology and health into management practices.

Open to all. No prior knowledge required.

Part 2 – Day 3 & 4:

Harnessing the Life in Soils

In combination with Part 1, the Certification Program is designed for professionals interested in applying soil biology to real-world farming and consulting scenarios.

Participants will learn about the latest research, advanced insights and practical tools for integrating soil biology into sustainable agricultural practices.

Prerequisite: completion of Day 1 & 2.

Availability

Annual Hawkesbury Campus, Western Sydney University

Program fee: \$1995.00



- Attendees are eligible to apply for CPSS accreditation on completion of 4-day Certificate Program..
- Certificate is issued by Western Sydney University on behalf of Soil Science Australia.
- ✓ Counts toward Ongoing Professional Development (OPD) for CPSS and Registered Soil Practitioner (RSP)



Course outline:

The course program will expand your understanding of how new research is driving renewed interest in soil health and soil biology as a function of overall farm productivity.

Key Topics Covered:

- History of soil biology and agriculture
- Diversity and functions of soil microbes that drive productivity
- Nutrient cycling of nitrogen, carbon, and other nutrients
- Plant and microbial interactions
- Soil fauna that influences soil biology and activity
- Integrating soil health methods into practice
- Latest research findings and emerging technologies
- Future directions in soil science and research

Additional Features:

- Networking opportunities with experts and delegates.
- Tour of Western's Hawkesbury Institute for the Environment field sites and world-class research facilities on Hawkesbury Campus.
- Conference dinner* with experts and delegates.
- Optional transfers to and from accommodation* and Hawkesbury Campus*
- Morning tea, lunch, and afternoon tea**

Who should attend this course?

This is an ideal program for keen and innovative delegates seeking to understand the benefits of soil biology as a driver of healthy crops and healthy foods in sustainable production environments:

- Proactive and innovative growers across horticultural and agricultural sectors
- Consultants, advisors and agronomists seeking to unlock new value from cropping operations

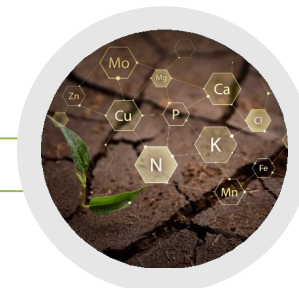
Program Evaluation and Certification:

The certification program will consist of evaluation of knowledge on concepts of soil health, soil biology as management practices that harness soil biology acquired during the course. It will include a quiz and a short essay response, plus two short answer questions on integration of methods/tools/approaches that harness soil biology.



*Crowne Plaza, Hawkesbury

**No afternoon tea -Day 2 due to field tour



Day 1

Introduction to soil biology	An overview of soil biology and its importance to soil health.
Soil biology in context	What are the agricultural drivers and practices for improving soil health/biology and why is there an increasing interest from growers?
Soil biology – diversity and functions	Concepts of soil health and biology, the diversity and how this links to farm productivity. Latest thinking.
Soil biology – nutrient cycling and productivity	Linking soil health and productivity to nutrient cycles including nitrogen and carbon cycling. Latest thinking.
Soil biology – plant / microbial interactions	Rhizobia and mycorrhizal fungi, their interactions with plants, roles and benefits. Latest thinking.
Soil biology – soil fauna	Soil fauna and ecosystem services. Latest thinking.

Day 2

Field site tour.

Soil suppression	Soil suppression – harnessing soil biology for better disease management and higher resource efficiency. Latest thinking
Management practices for improving soil health	A practical way of managing soil biology
Integrating soil biology/health into practise	Integrating soil biology in a practical sense – introductory experiences and some adoption barriers.
Round-table discussion	Take home message

Day 3

How to integrate soil biology in nutrient management	What is the key information needed to integrate soil biology in nutrient management decision making?
How to integrate soil biology in disease management	What is the key information needed to integrate soil biology in effective disease management decision making?
How to improve soil biology/health to make farming systems more resilient and profitable	Agronomic practices that improve soil health and their linkage to profitability and resilience.
Round table discussion	Groupwork: Overcoming constraints on productivity.

Day 4

Biological Indicators of soil health	Overview of available biological indicators of soil health and productivity and how to interpret those indicator reports.
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Certificate quiz.