MASTER CLASSES IN NEMATOLOGY, SOIL BIOLOGY AND SOIL HEALTH

Master Classes to be offered in 2022 are listed below. The classes are designed to cater for people who would like to learn more about the fascinating world beneath our feet. All soil organisms are covered to some extent, but nematodes are the focus because in addition to being important pests, they play a major role in maintaining the health of our soils.

Identification and quantification of plant-parasitic nematodes for diagnostic purposes
Date: 1, 2, 3 June 2022
Location: Day 1: Elizabeth Macarthur Agricultural Institute, Menangle, NSW. Days 2 and 3. University of Sydney, Eveleigh, NSW.
Content: Soil sampling procedures; nematode extraction and quantification; key nematode pests; morphological identification of commonly occurring plant-parasitic nematodes to genus level; damage thresholds; interpretation of results from diagnostic samples; nematode biosecurity
Instructors: Dr Graham Stirling, Dr Marcelle Stirling
Local contact: Dr Sophia Callaghan. sophia.callaghan@dpi.nsw.gov.au

Workshop on nematode pests of turfgrass
Date: 21 June 2022
Location: University of Melbourne, Parkville, VIC
Content: Southern sting nematode and other nematode pests of turfgrass, their distribution, symptoms produced and damage thresholds. Biosecurity tactics to reduce the spread of sting nematode. Nematode monitoring procedures. Management options to reduce damage caused by plant-parasitic nematodes.
Instructors: Dr Graham Stirling and Mr Peter Ruscoe
Registration: Enrol through the registration process for the Australian Sports Turf Management Conference to be held in Melbourne from 20-24 June, or contact Simone Staples: simone@agsca.com.au

Improving the health of vegetable-growing soils and reducing losses from nematode pests
Date: 23 June 2022
Location: University of Melbourne, Parkville, VIC.
Content: Root-knot nematode and other important nematode pests; monitoring nematode populations; nematicides; integrated nematode management; tactics to augment the soil biological community, enhance nematode-suppressive services and improve soil health; biosecurity issues relevant to the vegetable industry.
Instructor: Dr Graham Stirling
Local contact: Zali Mahoney. Zali.Mahony@ausveg.com.au

Nematodes: an important component of the soil biological community
Date: 24 June 2022
Location: University of Melbourne, Parkville, VIC.
Content: Key members of the soil biological community; ecosystem services provided by the soil biota; beneficial and detrimental plant and soil nematodes; key nematode pests and their management; free-living nematodes and their role in mineralising nutrients and enhancing disease suppressive services; nematodes as indicators of soil health.
Instructor: Dr Graham Stirling
Local contact: Dr Helen Hayden. helen.hayden@unimelb.edu.au

The soil biological community and its role in improving the health of agricultural soils
Date: 22 July 2022
Location: University of Queensland, St. Lucia, QLD.
Content: Constituents of the soil food web; key functions of soil organisms; assessing a soil's biological status; the impact of management on the soil biology; improving the health of agricultural soils
Instructors: Dr. Graham Stirling, Dr Marcelle Stirling, Ms Lois Eden
Local contact. Dr Gurion Ang. gurion.ang@uq.edu.au

Natural enemies of nematodes: their ecology and role as biological control agents
Date: 25 and 26 July 2022
Location: University of Queensland, St. Lucia, QLD.
Content: Nematode-trapping fungi; fungal parasites of nematode eggs; *Pasteuria*, a parasitic bacterium; predatory nematodes; predatory microarthropods; methods to enhance the suppressive services provided by naturally occurring soil organisms; biological products for nematode control.
Presenters: Dr. Graham Stirling, Dr Marcelle Stirling, Ms Lois Eden
Local contact. Dr Gurion Ang. gurion.ang@uq.edu.au

Morphological and molecular identification of plant-parasitic and free-living nematodes
Date: 22-25 November 2022
Location: University of Queensland, St. Lucia, QLD.
Content: Identification of commonly occurring plant parasites to genus and species level using morphological and molecular methods; identification of free-living nematodes by trophic group (bacterivores; fungivores, omnivores and predators) and to taxonomic levels suitable for ecological studies; nematode community analysis as a means of assessing the biological status of a soil.
Instructors: Dr. Graham Stirling, Dr. Neil Wilson, Dr Marcelle Stirling, Ms Lois Eden, Ms Jenny Cobon
Local contact. Dr Gurion Ang. gurion.ang@uq.edu.au

Potential participants
The classes will address the needs of undergraduate and postgraduate students in agricultural and biological sciences; consultants who provide professional advice in various areas of agriculture; graduates who may wish to undertake postgraduate training in nematology; professional staff who would like to improve their nematological knowledge; and farm managers and turfgrass superintendents who want to learn how to reduce losses caused by nematodes or improve the biological health of their soil.

Instructors
The classes have been organised by Dr Graham Stirling and Dr Marcelle Stirling, who established their own research and diagnostics company (Biological Crop Protection) in 1995. Graham has more than 50 years' experience as a nematologist/plant pathologist/soil biologist; has worked on most of the crops grown in Australia; has written more than 140 peer-reviewed research papers and numerous extension publications; has prepared two editions of `*Biological Control of Plant-Parasitic Nematodes*'; and co-authored '*Soil health, Soil biology, Soilborne diseases and Sustainable agriculture, A guide*'. Marcelle operated a nematode diagnostic service for 25 years and is one of the few people with the taxonomic skills needed to identify free-living nematodes. Other instructors include Mr Peter Ruscoe (SportsTurf Technology); Dr. Neil Wilson (Metagen), Ms Lois Eden (Univ. of Queensland) and Ms Jenny Cobon (Dept. of Agriculture and Fisheries, QLD.)

Costs
There will be no fee for the classes. Graham and Marcelle Stirling are providing the classes as a philanthropic venture, in the hope that they will stimulate interest in an important group of soil organisms that have largely been ignored by the tertiary education sector in Australia.

Enrolments
Classes will be limited to 20 participants, as this will ensure that each person receives an appropriate level of attention during the discussion and laboratory sessions. If you would like to attend one or more of the classes, contact either Graham Stirling at the email address listed below, or the person listed as the local contact.

Classes in 2023
If you would like to help organise a class in 2023, please contact Graham Stirling

Graham Stirling
Phone: 0412 083 489
Email: graham.stirling@biolcrop.com.au