

BURLEIGH DODDS SERIES IN AGRICULTURAL SCIENCE

Advances in measuring soil health

Edited by Professor Wilfred Otten, Cranfield University, UK



 burleigh dodds
SCIENCE PUBLISHING

AVAILABLE NOW

About the book

The volume reviews advances in measuring soil biological activity such as earthworms and fungi as indicators of soil health. It also surveys developments in measuring soil physical properties through advances in visual, imaging and geophysical techniques, as well as the methods used to measure chemical properties.

About the editor

Dr Wilfred Otten is Professor of Soil Biophysics at Cranfield University, UK. He was the President of the British Soil Science Society (2017-2018), and is a Fellow of the Institute of Soil Science. He is internationally-renowned for his research on measuring and modelling physical, chemical and microbial processes in soil.

Advances in measuring soil health

Available in print and digital formats:

ISBN - print	978-1-78676-426-3
Pages	382
Pub. Date	June 2021
Price	£180/\$235/€215/C\$305
Series No	AS92

Order via our online bookshop at <https://bdspublishing.com>, your usual book supplier, or pass to your librarian.

Enquiries to info@bdspublishing.com

For a complete list of titles visit www.bdspublishing.com

T: +44 (0) 1223 839365

E: info@bdspublishing.com

www.bdspublishing.com

 @bdspublishing

 Burleigh Dodds Science Publishing

 burleigh dodds
SCIENCE PUBLISHING

Advances in measuring soil health

Edited by: Professor Wilfred Otten, Cranfield University, UK

Part 1 Measuring soil biological activity

1. Assessing soil health by measuring fauna: *Felicity Crotty, Royal Agricultural University, UK*
2. Quantifying earthworm community structures as indicators of soil health: *Jacqueline L. Stroud, formerly Rothamsted Research, UK*
3. Characterisation of fungal communities and functions in agricultural soils: *Andy F. S. Taylor, The James Hutton Institute and University of Aberdeen, UK; and Thomas Freitag, Lucinda J. Robinson and Duncan White, The James Hutton Institute, UK*

Part 2 Measuring soil physical and chemical properties

4. Advances in visual soil evaluation techniques: *Mansonia Pulido-Moncada, Aarhus University, Denmark; Bruce C. Ball, formerly Scotland's Rural College (SRUC), UK; and Wim M. Cornelis, Ghent University, Belgium*
5. Imaging soil structure to measure soil functions and soil health with X-ray computed micro-tomography: *Alexandra Kravchenko and Andrey Guber, Michigan State University, USA*
6. Geophysical methods to assess soil characteristics: *Ho-Chul Shin, Rothamsted Research, UK; Guillaume Blanchy, Lancaster University, UK; Ian Shield, Peter Fruen, Timothy Barraclough and Christopher W. Watts, Rothamsted Research, UK; Andrew Binley, Lancaster University, UK; and William R. Whalley, Rothamsted Research, UK*

7. Advances in techniques to assess soil erodibility: *R. J. Rickson, E. Dowdeswell Downey, G. Alegbeleye and S. E. Cooper, Cranfield University, UK*
8. Advances in measuring mechanical properties of soil in relation to soil health: *Muhammad Naveed, University of West London, UK*
9. Advances in near-infrared (NIR) spectroscopy to assess soil health: *Francisco J. Calderón, Oregon State University, USA; Andrew J. Margenot, University of Illinois at Urbana-Champaign, USA; and Scarlett Bailey, National Resources Conservation Service - National Soil Survey Center, USA*
10. Spectral mapping of soil organic carbon: *Bas van Wesemael, Université catholique de Louvain, Belgium*

Part 3 From measurement to management

11. Developing soil health indicators for improved soil management on farm: *Elizabeth Stockdale, NIAB, UK; Paul Hargreaves, Scotland's Rural College (SRUC), UK; and Anne Bhogal, ADAS Gleadthorpe, UK*
12. Developing decision support systems (DSS) for farm soil and crop management: *Matt Aitkenhead, The James Hutton Institute, UK*