Understanding and optimising the nutraceutical properties of fruit and vegetables
Editors: Professor Victor Preedy, King's College – University of London, UK and Dr Vinood Patel, University of Westminster, UK

This collection reviews research on phytochemicals in fruits and vegetables, their health benefits and ways these benefits can be optimised to improve human health.

CHAPTER TITLES
Part 1 Phytochemical compounds in fruits and vegetables: polyphenols; 1. Advances in understanding the nutraceutical properties of antioxidants in fruits and vegetables; 2. Advances in understanding the nutraceutical properties of phenolic compounds in fruits and vegetables; 3. Understanding the nutraceutical properties of flavonoids in fruits and vegetables: chemical structure and groups; 4. Understanding the nutraceutical properties of flavonoids in fruits and vegetables: mechanisms of action;

Part 2 Phytochemicals in fruits and vegetables: glucosinolates and organosulfur compounds;
5. Health-promoting effects of glucosinolates and their breakdown products; 6. Nutraceutical potential of glucosinolates; 7. Understanding the health benefits and nutraceutical properties of organosulphur compounds in vegetables; Part 3 Phytochemicals and the prevention of disease; 8. Advances in understanding the role of plant phytochemicals in preventing cancer;

To view the full table of contents for this title, please visit our website.
Advances in postharvest management of horticultural produce

Editor: Professor Chris Watkins, Cornell University, USA

Postharvest losses remain a serious problem in the fresh produce sector. This collection reviews advances in preservation and disinfection, monitoring and management techniques to optimise safety and quality of fresh fruit and vegetables.

CHAPTER TITLES
Achieving sustainable cultivation of temperate zone tree fruits and berries

Volume 2: Case studies

Editor: Professor Gregory A. Lang, Michigan State University, USA

The second volume in this collection reviews advances in breeding and cultivation of key stone fruits (peach, cherry, plum and apricot), pome fruits (pear and apple), and berry fruits (strawberry, raspberry, blackberry and blueberry).

CHAPTER TITLES


Use code FRUIT20 to receive 20% off your purchase of any titles from our Crops collection.

Pages 470
Pub. Date June 2019
Price £140/$180/€215/C$240
Series No ASS4

Achieving sustainable cultivation of apples

Editor: Dr Kate Evans, Washington State University, USA

This book reviews our understanding of tree and fruit physiology and how it can be used in breeding better varieties. It also discusses pests and diseases and ways they can be prevented or controlled to make cultivation more productive.

CHAPTER TITLES


Use code FRUIT20 to receive 20% off your purchase of any titles from our Crops collection.

ISBN - print 978-1-78676-032-6
ISBN - ePUB 978-1-78676-033-3
ISBN - ePDF 978-1-78676-034-0
Pages 616
Pub. Date June 2017
Price £190/$245/€230/C$325
Series No AS18

Achieving sustainable cultivation of tomatoes

Editors: Dr Autar Mattoo, ARS-USDA, USA and Professor Avtar K. Handa, Purdue University, USA

This book reviews key developments in tomato breeding, including developing improved varieties with desirable traits such as drought or pest resistance. It also discusses ways of improving cultivation techniques as well as pests, diseases and their control.

CHAPTER TITLES


Use code FRUIT20 to receive 20% off your purchase of any titles from our Crops collection.

ISBN - print 978-1-78676-040-1
ISBN - ePDF 978-1-78676-043-2
Pages 564
Pub. Date March 2017
Price £180/$235/€215/C$305
Series No AS07

Empowering knowledge – delivering sustainable agriculture
Advances in monitoring of native and invasive insect pests of crops
Editors: Dr Michelle Fountain, NIAB-EMR, UK and Dr Tom Pope, Harper Adams University, UK

Early detection of insect pests is critical to successful integrated pest management (IPM) programmes. This collection reviews the wealth of research on improving monitoring techniques for the detection of both native and alien insect pests.

CHAPTER TITLES

Improving integrated pest management in horticulture
Editor: Professor Rosemary Collier, Warwick University, UK

This collection reviews current advances in integrated pest management (IPM) for horticultural crops, including the use of biological control mechanisms, technological developments such as proximal sensors, agronomic practices and physical control.

CHAPTER TITLES
Part 1 Using biological agents in integrated pest management; 1. Advances in biopesticides for insect control in horticulture; 2. Advances in bioprotectants for plant disease control in horticulture; 3. Advances in biofumigants as an IPM tool in horticulture; 4. Improving application systems for bioprotectants in integrated pest management (IPM) programmes in horticulture; Part 2 Using decision support systems in integrated pest management; 5. Advances in insect pest and disease monitoring and forecasting in horticulture; 6. Advances in proximal sensors to detect crop health status in horticultural crops; 7. Advances in decision support systems (DSSs) for integrated pest management in horticultural crops; Part 3 Improving integrated pest management techniques and implementation; 8. The use of agronomic practices in integrated pest management programmes in horticulture; 9. Advancing conservation biological control as a component of integrated pest management of horticultural crops; 10. Assessing the economics of integrated pest management for horticultural crops; 11. Encouraging integrated pest management uptake in horticultural crop production; Part 4 Case studies; 12. Practical application of integrated pest management in greenhouses and protected cultivation; 13. Practical applications of integrated pest management in horticultural cultivation: the cases of protected tomato and outdoor Brassica production; 14. Practical application of integrated pest management to control cabbage root fly in vegetables.

Microbial bioprotectants for plant disease management
Editors: Dr Jürgen Köhl, Wageningen University & Research, The Netherlands and Dr Willem J. Ravensberg, Koppert, The Netherlands

This collection summarises and reviews the wealth of recent research on the development of more environmentally friendly biological methods to control plant diseases.

CHAPTER TITLES

To view the full table of contents for this title, please visit our website.
Biopesticides for sustainable agriculture

Editors: Professor Nick Birch, formerly The James Hutton Institute, UK and Professor Travis Clare, Lincoln University, New Zealand

Part 1 of this collection reviews research on developing and assessing new biopesticides. Part 2 summarises advances in different types of entomopathogenic biopesticide. Part 3 assesses semiochemical, peptide-based and other natural substance-based biopesticides.

CHAPTER TITLES
Part 1 General; 1. Improving methods for developing new microbial biopesticides; 2. Implementing biopesticides as part of an integrated pest management (IPM) programme; 3. Improving regulatory approval processes for biopesticides and other new biological technologies in agriculture; Part 2 Microbial biopesticides, entomopathogenic nematodes and mites; 4. Advances in the use of entomopathogenic fungi as biopesticides in suppressing crop insect pests; 5. Advances in the use of entomopathogenic bacterial/microbial control agents (MCAs) as biopesticides in suppressing crop insect pests; 7. Plant growth-promoting bacteria (PGPBs) as biocontrol agents against insect and invertebrate pests; 8. Advances in the use of entomopathogenic viruses as biopesticides in suppressing crop insect pests; 9. Advances in the use of entomopathogenic nematodes (EPNs) as biopesticides in suppressing crop insect pests; 10. Advances in the use of entomopathogenic oomycetes as biopesticides in suppressing crop insect pests; Part 3 Natural substance-based biopesticides; 11. Advances in the use of semiochemicals in integrated pest management: pheromones; 12. Possible use of semiochemical, peptide-based and other natural substance-based biopesticides.

Integrated management of insect pests: Current and future developments

Editors: Professor Marcos Kogan, Oregon State University, USA and Emeritus Professor E. A. Heinrichs, University of Nebraska-Lincoln, USA

This volume reviews current developments in integrated pest management (IPM), focussing on insect pests. It discusses advances in understanding species and landscape ecology on which IPM is founded, as well as advances in cultural, physical and biological methods of control.

CHAPTER TITLES
Part 1 Ecological foundations of IPM; 1. Foundations of an IPM program: detection, identification, and quantification; 2. Advances in understanding species ecology: phenomenological and life cycle modeling of insect pests; 3. Understanding agroecosystems and pest management: from chemical control to integrated biodiversity management; 4. Advances in understanding agroecosystems ecology and its applications in integrated pest management; 5. Advances in understanding the ecology of invasive crop insect pests and their impact on IPM; 6. Plant-insect interactions, host-plant resistance, and integrated pest management; Part 2 Cultural and physical methods in IPM; 7. Advances in breeding crops resistant to insect pests: rice as a paradigm; 8. The role and use of genetically engineered insect-resistant crops in integrated pest management systems; 9. Biotechnology applications for integrated pest management; 10. Advances in physical control methods in IPM; 11. Robot-enhanced insect pest control: reality or fantasy?; Part 3 Biological methods in IPM; 12. Advances in classical biological control to support IPM of perennial agricultural crops; 13. Advances in conservation biological control and habitat management for IPM; To view the full table of contents for this title, please visit our website.

Integrated management of diseases and insect pests of tree fruit

Editors: Professor Xiangming Xu and Dr Michelle Fountain, NIAB-EMR, UK

This collection reviews advances in understanding key diseases and insect pests of tree fruit. It shows how this understanding can be used to improve integrated disease and pest management techniques.

CHAPTER TITLES

Keep up to date with the latest book news at www.bdspublishing.com
CROP MANAGEMENT

Advances in horticultural soilless culture
Editor: Professor Nazim S. Gruda, University of Bonn, Germany
Soilless cultivation techniques have attracted growing attention. This collection reviews current research on optimising substrates for soilless cultivation and assesses recent advances in technologies, such as fertigation systems and process control.

CHAPTER TITLES

Biostimulators for sustainable crop production
Editors: Youssif Rouphael, University of Naples Federico II, Italy; Patrick du Jardin, University of Liège, Belgium; Patrick Brown, University of California-Davis, USA; Stefania de Pascale, University of Naples Federico II, Italy; and Giuseppe Colla, University of Tuscia, Italy
Part 1 reviews research on ways of evaluating biostimulants. Part 2 surveys the various types of biostimulant, from arbuscular mycorrhizal fungi (AMF) to seaweed extracts. Part 3 discusses advances in their practical application in areas such as enhancing nutrient use efficiency (NUE).

CHAPTER TITLES

Achieving sustainable greenhouse cultivation
Editors: Professor Leo Marcelis and Dr Ep Heuvelink, Wageningen University, The Netherlands
Greenhouse and other forms of protected cultivation create controlled environments to offset climate change and optimise resource use. This book reviews current research in more efficient climate control and root development to optimise their use.

CHAPTER TITLES

Use code FRUIT20 to receive 20% off your purchase of any titles from our Crops collection.

Available as books and chapters, in print and digital formats
Advances in sensor technology for sustainable crop production

Editors: Dr Craig Lobsey, University of Southern Queensland, Australia and Dr Asim Biswas, University of Guelph, Canada

This collection reviews key advances in sensor technology, including developments in proximal and remote sensing techniques to measure and monitor crop health, weeds and diseases.

CHAPTER TITLES


Advances in plant phenotyping for more sustainable crop production

Editor: Professor Achim Walter, ETH Zurich, Switzerland

Soil health is critical to successful agriculture. This second volume reviews ways of classifying and measuring soils and their properties. It then discusses ways soil health can be maintained or enhanced to ensure sustainable agricultural production, as well as regional case studies of managing soil health in practice.

CHAPTER TITLES

Part 1 The development of phenotyping as a research field; 1. Origins and drivers of crop phenotyping; 2. The evolution of trait selection in breeding: from seeing to remote sensing; Part 2 Sensor types; 3. Advances in optical analysis for crop phenotyping; 4. Advances in the use of thermography in crop phenotyping; 5. Advances in the use of X-ray computed tomography in crop phenotyping; Part 3 Carrier/delivery systems; 6. Field robots for plant phenotyping; 7. Advances in the use of aerial systems/UAVs for crop phenotyping as examples for lean, low-cost, high-throughput field crop phenotyping systems; Part 4 Data analysis; 8. Meeting computer vision and machine learning challenges in crop phenotyping; Part 5 Case studies; 11. Using phenotyping techniques to analyse crop functionality and photosynthesis; 12. Using phenotyping techniques to predict and model grain yield: translating phenotyping into genetic gain; 13. Automated assessment of plant diseases and traits by sensors: how can digital technologies support smart farming and plant breeding?

Robotics and automation for improving agriculture

Editor: Professor John Billingsley, University of Southern Queensland, Australia

Robotics has great potential in improving productivity and precision in agriculture. The book reviews advances in technologies such as machine vision and control systems, as well as applications from crop planting, fertilisation, pest and weed management to livestock production.

CHAPTER TITLES


All of our titles are available in hardback, e-book and e-chapter formats from www.bdspublishing.com

NB: All information subject to change.
Get to the heart of your research needs with our new series: Instant Insights!

Instant Insights are collections of specially formulated reviews of current topics and key research in agriculture drawn from a database of over 2000 chapters, covering crop, livestock and forestry science.

**Vertical farming in horticulture**
- ISBN - print: 978-1-78676-922-0
- Pages: 144
- Pub. Date: December 2020
- Price: £37.99/$49.99/€45.99/C$64.99
- Series No: 03

**Nutraceuticals in fruit and vegetables**
- ISBN - print: 978-1-78676-924-4
- Pages: 106
- Pub. Date: December 2020
- Price: £37.99/$49.99/€45.99/C$64.99
- Series No: 04

Browse the full collection at www.bdspublishing.com

Ways to order

All our books are available in print and digital formats. Chapters are available in digital formats only.

**PRINT**
- All territories (exc. US & Canada)
  - Please pass on to your librarian or contact your usual book supplier. Direct orders to ipsuk.orders@ingramcontent.com
  - Enquiries to info@bdspublishing.com
- US & Canada
  - Please pass on to your librarian or contact your usual book supplier. North American enquiries info@bdspublishing.com
  - Via the website www.bdspublishing.com
  - Shop url: https://shop.bdspublishing.com

**DIGITAL**
- Institutional/Library purchases
  - Taylor & Francis www.taylorfrancis.com
- UK, Europe & Rest of World
  - Mark Charlesworth: Head of eBook Sales: mark.charlesworth@tandf.co.uk
- US & Canada
  - Evelyn Elias: Director, Library Sales, Books evelyn.elias@taylorandfrancis.com
  - E-book aggregators e.g. ProQuest, EBSCO, etc.

**RECOMMEND TO YOUR LIBRARY**
- Complete the online form at https://bdspublishing.com/resources/library-recommendation

**E-BOOK & E-CHAPTER PURCHASES**
- Via the website www.bdspublishing.com
- Chapter website: https://www.bdspublishing.com

General enquiries to info@bdspublishing.com  Follow us: @bdspublishing  Burleigh Dodds Science Publishing

Contact Us

Burleigh Dodds Science Publishing Limited
82 High Street
Sawston
Cambridge
CB22 3HJ  UK

Tel: +44 (0) 1223 839365
Email: info@bdspublishing.com
www.bdspublishing.com
@bdspublishing
Burleigh Dodds Science Publishing