BURLEIGH DODDS SERIES IN AGRICULTURAL SCIENCE



AVAILABLE NOW

About the book

This collection provides an authoritative review of the latest developments in integrated weed management (IWM). The book covers new research on understanding weed ecology as a basis for more sustainable control, as well as

developments in technology to better target IWM techniques.

About the editor

Professor Per Kudsk is Head of the Crop Health Section in the Department of Agroecology at Aarhus University, Denmark. An internationally-known expert in integrated weed management, he is a former President of the European Weed Research Society and has played a leading role in EU research projects such as IWMPRAISE and the ENDURE Network.

Advances in integrated weed management

Available in print and digital formats: ISBN - print 978-1-78676-745-5

Pages 452 Pub. Date April 2022

Price £150/\$195/€180/C\$255

Series No AS113

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

In Burleigh Dodds Science Publishing



Empowering knowledge - delivering sustainable agriculture

Advances in integrated weed management

Edited by: Professor Per Kudsk, Aarhus University, Denmark

Part 1 Weed ecology

- Advances in understanding the contribution of weeds to the functioning of agroecosystems: Sandrine Petit, Séverin Yvoz, Alexandre Ploteau, Camille Zuccolo and Stéphane Cordeau Agroécologie, AgroSup Dijon, INRAE, Univ. Bourgogne, Univ. Bourgogne Franche-Comté, Dijon, France
- Advances in understanding the dynamics of weed communities in integrated weed management systems: Jonathan Storkey, Sustainable Agriculture Science, Rothamsted Research, UK
- Advances in managing arable weed propagules: Bärbel Gerowitt, University of Rostock, Germany; and Barbara Baraibar, University of Lleida – Agrotecnio, Spain
- Advances in understanding allelopathic interactions between weeds and crops: Çağla Görkem Eroğlu and Aurélie Gfeller, Agroscope, Plant Production Systems, Herbology in Field Crops, Switzerland; Anna Elizabeth Louw-Gaume, Agroscope, Corporate Strategy, Switzerland; and Judith Wirth, Agroscope, Plant Production Systems, Herbology in Field Crops, Switzerland
- Advances in understanding invasive characteristics in weed species: Ahmet Uludağ, Çanakkale Onsekiz Mart University, Turkey; Mehmet Arslan, Erciyes University, Turkey; Ilhan Üremiş, Hatay Mustafa Kemal University, Turkey; and Necmi Aksoy, Düzce University, Turkey

Part 2 Intelligent weed control technologies

- 6. Modelling the effects of cropping systems on weed dynamics: the trade-off between process analysis and decision support: Nathalie Colbach, AgroSup Dijon, INRAE, Université de Bourgogne, France
- 7. Developing decision support systems (DSS) for weed management: Panagiotis Kanatas, University of Patras, Greece; and Ilias Travlos, Ioannis Gazoulis and Alexandros Tataridas, Agricultural University of Athens, Greece

- 8. Advanced detection technologies for weed scouting: C. Fernandez-Quintanilla, J. Dorado and J. M. Peña, Instituto de Ciencias Agrarias (CSIC), Spain; and D. Andújar, Centro de Automatica y Robótica (CSIC), Spain
- Advances in precision application technologies for weed management: Ran N. Lati, Newe Ya'ar Research Center, Agricultural Research Organization, Israel; Roland Gerhards, University of Hohenheim, Germany; Hanan Eizenberg and Maor Matzrafi, Newe Ya'ar Research Center, Agricultural Research Organization, Israel; Lior Blank, Agricultural Research Organization – Volcani Center, Israel; and Svend Christensen, University of Copenhagen, Denmark
- Advances in mechanical weed control technologies: Bo Melander and Margaret R. McCollough, Aarhus University, Denmark

Part 3 Case studies

- 11. On-farm implementation of integrated weed management: M. M. Riemens and M. Elings, Wageningen University and Research, The Netherlands
- Optimising integrated weed management in narrow-row crops: L. Bonin, ARVALIS-Institut du Végétal, France; R. Leskovšek, Agricultural Institute of Slovenia, Slovenia; C. Moonen, Institute of Life Science, Italy; W. Smith, NIAB, UK; and M. Sønderskov, Aarhus University, Denmark
- Integrated weed management in grasslands: Urs Schaffner, CABI, Switzerland; Heinz Müller-Schärer, University of Fribourg, Switzerland; and Andreas Lüscher, Agroscope, Switzerland
- 14. Integrated weed management in perennial woody crops: Verónica Pedraza and José Luis González-Andújar, IAS-CSIC, Spain; Victoire Huet and Paul Tuteirihia, NIAB EMR, UK; and Julien Lecourt, Pôle Scientifique des vignobles Bernard Magrez, France
- Evaluating the economics of integrated weed management: Pieter de Wolf, Saskia Houben, William Bijker and Koen Klompe, Wageningen Plant Research. The Netherlands