Achieving sustainable cultivation of wheat

Volume 2: Cultivation techniques

Edited by Professor Peter Langridg



burleigh dodd

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BIC/THEMA classification

TVKC - Cereal crops, PSTS - Plant ecology, TVDR - Irrigation, TVF -Sustainable agriculture, TVG - Organic farming, TVKF - Fertilizers & manures, TVM - Smallholdings



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New title information

Achieving sustainable cultivation of wheat Volume 2

Cultivation techniques

Edited by: Professor Peter Langridge, University of Adelaide, Australia

Endorsement:

"These books present a comprehensive coverage of issues facing wheat production globally. The authors represent the top scientists involved in the diverse areas that are important for sustainable wheat production and will this book provides an excellent resource for those interested in wheat improvement and production." Dr Hans-Joachim Braun, Director Global Wheat Program and CRP Wheat, International Maize and Wheat Improvement Center (CIMMYT), Mexico

Description:

Wheat is the most widely cultivated cereal in the world and a staple food for around 3 billion people. It has been estimated that demand for wheat could increase by up to 560% by 2050. There is an urgent need to increase yields in the face of such challenges as climate change, threats from pests and diseases and the need to make cultivation more resource-efficient and sustainable.

Drawing on an international range of expertise, this collection focuses on ways of improving the cultivation of wheat at each step in the value chain, from breeding to post-harvest storage. Volume 1 reviews research in improving cultivation techniques. Chapters in Part 1 review topics such as variety selection, seed and root growth, water and nutrient management. Part 2 goes on to discuss broader issues such as sustainable intensification and organic cultivation. The final part of the collection covers ways of improving wheat cultivation in the developing world.

Achieving sustainable cultivation of wheat Volume 2: Cultivation techniques will be a standard reference for cereal scientists in universities, government and other research centres and companies involved in wheat cultivation. It is accompanied by Volume 1 which reviews breeding, quality traits, pests and diseases.

Key features:

- Reviews advances in cultivation practice such as seed establishment and more efficient irrigation techniques;
- Summarises developments in 'climate smart' agriculture such as conservation tillage and organic wheat cultivation;
- Discusses ways of supporting smallholders improve wheat cultivation in North Africa and other regions in the developing world

Audience:

Academic researchers in cereal science; International and national agencies supporting agricultural development; Cereal processors and companies supplying the agricultural sector.

Editor details:

Dr Peter Langridge is Emeritus Professor of Plant Science at the University of Adelaide and former CEO of the Australian Centre for Plant Functional Genomics (ACPFC). Professor Langridge is also Chair of the Scientific Board of the Wheat Initiative set up to coordinate international research in wheat.





New title information

Table of contents:

Part 1 Wheat cultivation techniques

1. Variety selection in wheat cultivation: Arun Joshi, CIMMYT, Mexico, Vinod Kumar Mishra, Banaras Hindu University, India and Simanchal Sahu, Odisha University of Agriculture and Technology, India

2. Establishment and root development in wheat crops: Peter J. Gregory and Christina K. Clarke, University of Reading, UK

3. Conservation tillage for sustainable wheat intensification: the example of South Asia: Vijesh Krishna, Georg-August University of Gö ttingen, Germany; Alwin Keil, International Maize and Wheat Improvement Center (CIMMYT), India; Sreejith Aravindakshan, Wageningen University, The Netherlands; and Mukesh Meena, Indian Institute of Soil and Water Conservation, India

4.Improving water management in winter wheat: Qingwu Xue, Q. Xue, J. Rudd, J. Bell, T. Marek and S. Liu, Texas A&M Agrilife Research and Extension Center, USA;

5.Advances in wheat drying and storage: Bhadriraju Subramanyam, Kansas State University, USA

Part 2 Wheat crop management

6.Wheat crop modelling to improve yields: J. R. Guarin and S. Asseng, University of Florida, USA

7.Integrated crop management of wheat: Brian L. Beres, Reem Aboukhaddour and Haley Catton, Lethbridge Research and Development Centre, Canada

8.Organic production of wheat and spelt: T. F. Döring, Humbolt-Universität zu Berlin, Germany

9. Durum wheat: production, challenges and opportunities: J. M. Clarke, K. Nilsen, D. Khitiri, X. Lin and C. J. Pozniak, University of Saskatchewan, Canada; K. Ammar, International Maize and Wheat Improvement Center, Mexico

Part 3 Improving wheat cultivation in the developing world

10. Supporting smallholders in improving wheat cultivation: Tinashe Chiurugwi, Simon Kerr, Ian Midgley, and Lesley Boyd, National Institute of Agricultural Botany (NIAB), UK; Johnson Kamwaga, Food Crops Research Centre - Njoro, Kenya; Peter Njau, Highlands Agriconsult Services Ltd, Kenya; Terry Van Gevelt, University of Cambridge, UK; Claudia Canales and Max Marcheselli, The Malaysian Centre for Commonwealth Studies (MCSC) and the Cambridge Malaysian Education and Development Trust (CMEDT), UK

11.Improving wheat cultivation in Asia: Rajiv Kumar Sharma, Global Wheat Improvement Program - CIMMYT, India

12. Improving wheat production in the Central and West Asia and North Africa (CWANA) region: W. Tadesse, A. Amri, M. Sanchez-Garcia, M. El-Bouhssini, M. Karrou, S. Patil, F. Bassi and M. Baum, International Center for Agricultural Research in the Dry Areas, Morocco; and T. Oweis, International Center for Agricultural Research in the Dry Areas, Jordan;

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