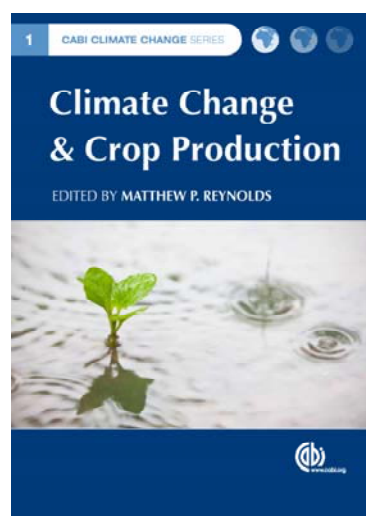


new book information from CABI



Climate Change and Crop Production

CABI Climate Change Series

Edited by **M P Reynolds**, CIMMYT, Mexico

ISBN: 978 1 84593 633 4

May 2010 / c.320 pages / Hardback / 244x172 mm / 50 illustrations

£85/US\$160/€120

Subject Classification: TVB, RNPG, TVK

Territorial Market Rights: World

Description:

Current trends in population growth suggest that global food production is unlikely to satisfy future demand under predicted climate change scenarios unless rates of crop improvement are accelerated. In order to maintain food security in the face of these challenges, a holistic approach that includes stress-tolerant germplasm, sustainable crop and natural resource management, and sound policy interventions will be needed.

The first volume in the *CABI Climate Change Series*, this book will provide an overview of the essential disciplines required for sustainable crop production in unpredictable environments. Chapters include discussions of adapting to biotic and abiotic stresses, sustainable and resource-conserving technologies and new tools for enhancing crop adaptation. Examples of successful applications as well as future prospects of how each discipline can be expected to evolve over the next 30 years are also presented.

Audience:

Researchers and students in crop and environmental science as well as policy makers

Contents:

1. Adapting crops to climate change: a summary

Predictions of climate change and of its impact on crop productivity

2. Scenarios of climate change within the context of agriculture
3. Economic impacts of climate change on agriculture to 2030

Adapting to biotic and abiotic stresses through crop breeding

4. Preventing potential disease and pest epidemics under a changing climate
5. Breeding for adaptation to heat and drought stress
6. Breeding crops for tolerance to salinity, waterlogging and inundation
7. Multi-location testing as a tool to identify plant response to global climate change
8. Genetic approaches to reduce greenhouse gas emissions: increasing carbon capture and decreasing environmental impact

Sustainable and resource conserving technologies for adaptation to, and mitigation of, climate change

9. Greenhouse gas mitigation in the main cereal systems: rice, wheat and maize
10. How conservation agriculture can contribute to buffering climate change
11. Management of resident soil microbial community structure and function to suppress soilborne disease development

New tools for enhancing crop adaptation to climate change

12. Biotechnology in agriculture
13. GIS & crop simulation modelling applications in climate change research
14. Statistical models for studying and understanding genotype x environment interaction in an era of climate change and increased genetic information