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Nota di contenuto	Chapter 1. Climate change: An Overview -- Chapter 2. Climate change, agricultural productivity, and food security -- Chapter 3. Climate change and Process Based Soil Modeling -- Chapter 4. Soil microbes and climate smart agriculture -- Chapter 5. Climate Change Impacts on Legumes Crop Production and Adaptation Strategies -- Chapter 6. Cereal crop modeling for food and nutrition security -- Chapter 7. Changing climate scenario: Perspectives of Camelina sativa as low input biofuel and oilseed crop -- Chapter 8. Greenhouse Gas Emissions and Mitigation Strategies in Rice Production Systems -- Chapter 9. Fiber Crops in Changing Climate -- Chapter 10. Estimation of Crop Genetic Coefficients to Simulate Growth and Yield under Changing Climate -- Chapter 11. Climate Change Impacts on Animal Production -- Chapter

12. Climate change and global insect dynamics -- Chapter 13. Sustainable Solutions to Food Insecurity in Nigeria: Perspectives on Irrigation, Crop-Water Productivity, and antecedents -- Chapter 14. Functions of Soil Microbes Under Stress Environment -- Chapter 15. Modeling impacts of climate change and adaptation strategies for cereal crops in Ethiopia -- Chapter 16. Strategies for Mitigating Greenhouse Gas Emissions from Agricultural Ecosystems -- Chapter 17. Environmental and Economic Benefits of Sustainable Sugarcane Initiative and Production Constraints in Pakistan: A Review -- Chapter 18. Modeling Photoperiod Response of Canola under Changing Climate -- Chapter 19. Modeling and Field Based Evaluation of Vernalisation Requirement of Canola for Higher Yield Potential -- Chapter 20. Integrated crop-livestock system: Prospectus for climate change adaptation in Jordan, a case study -- Chapter 21. Impact of Salinity Intrusion Problem in the sediments of paddy field and farmers adaptation initiative: Case Study.

Sommario/riassunto

This book covers all aspects related to climate change and agriculture. The book discusses Global Climate Models (GCMs), Coupled Model Intercomparison Project (CMIP) and application of strategic management tool that includes RCP (Representative concentration Pathway), SSP (Shared Socio-economic Pathways) and SPA (Shared climate Policy Assumptions). The book provides information on how climate change, agricultural productivity and food security are interlinked. The impacts of climate change on food security are studied through different climatic drivers e.g., ENSO (El Niño–Southern Oscillation) and SOI (Southern Oscillation Index). These drivers are responsible for the climatic extreme events hence early prediction of these drivers could help to design appropriate adaptive measures for the agriculture sector and could be considered as early warning tools for risk management. Similarly, climate change and process-based soil modeling as well as the role of soil microbes and climate smart agriculture are discussed in this book. Climate change impacts on legume crop production and adaptation strategies are presented, with details about cereal crop modeling, perspectives of Camelina sativa as well as low input biofuel and oilseed crop, greenhouse gases (GHGs) emissions and mitigation strategies.