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Nota di contenuto	Chapter 1. Geospatial Technologies for Crops and Soils: An Overview -- Chapter 2. Remote Sensing and Geographic Information System: A Tool for Precision Farming -- Chapter 3. Retrieval of Crop Biophysical Parameters Using Remote Sensing.-Chapter 4. Spatialization of Crop Growth Simulation Model Using Remote Sensing -- Chapter 5. Crop Monitoring through Microwave Remote Sensing -- Chapter 6. Crop Production Estimation Using Remote Sensing -- Chapter 7. Concepts and Applications of Chlorophyll Fluorescence: A Remote Sensing Perspective -- Chapter 8. Point and Imaging Spectroscopy in the Geospatial Analysis of Soils -- Chapter 9. Digital Soil Mapping: The Future Need for Sustainable Soil Management -- Chapter 10. Soil Moisture Retrieval Techniques Using Satellite Remote Sensing -- Chapter 11. Geospatial Modeling for Soil Quality Assessment -- Chapter 12. Land Degradation Assessment Using Geospatial Techniques -- Chapter 13. Groundwater Management for Irrigated Agriculture through Geospatial Techniques -- Chapter 14. Assessing Urban Sprawl Impact on Agricultural Land using Geospatial Techniques.
Sommario/riassunto	The sustainable development of the agriculture sector is the only option to meet the demands of increased and economically viable production in a changing climate. This means there is a need to introduce the latest technologies to enhance production, and also help policymakers make decisions for the future. Geospatial technologies &

tools, such as remote sensing, geographical information systems (GIS), global positioning systems (GPS), and mobile & web applications, provide unique capabilities to analyze multi-scale, multi-temporal datasets, and support decision-making in sustainable agriculture development and natural resources management. Further, the availability of reliable and timely geospatial information on natural resources and environmental conditions is essential for sustainable agricultural development and food security. Since remote sensing solutions are fast, non-destructive and have large spatial coverage, they can play a significant role in the identification, inventory, and mapping of land resources. Over the past four decades, remote sensing has proved to be a cost-effective and powerful tool to assess crop and soil properties in varying spatial and temporal scales using both visual and digital techniques. Satellite remote sensing coupled with GIS & mobile-app based positional information has emerged as an efficient tool for optimizing input resources, and minimizing cost of production and risk of biotic/ abiotic factors nature to promote sustainable agriculture. This book comprehensively documents the applications of space-based technologies for crop and soil assessments for the sustainable development of agriculture.
