

1. Record Nr.	UNINA9911035052203321
Autore	Chouhan Siddharth Singh
Titolo	AgriTech Revolution : Next-Gen Solutions and Challenges in Modern Agriculture // edited by Siddharth Singh Chouhan, Rajneesh Kumar Patel, Uday Pratap Singh, Sanjeev Jain
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2025
ISBN	9789819512683 9789819512676
Edizione	[1st ed. 2025.]
Descrizione fisica	1 online resource (540 pages)
Collana	Biomedical and Life Sciences Series
Altri autori (Persone)	PatelRajneesh Kumar SinghUday Pratap JainSanjeev
Disciplina	630
Soggetti	Agriculture Human ecology - Study and teaching Biotechnology Computational intelligence Bioinformatics Botany Environmental Studies Computational Intelligence Plant Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. AI- Enhanced Agriculture: Cultivating the Future -- 2. Artificial intelligence in Agriculture: A transformative direction -- 3. Application of nanotechnology in soil fertility management and crop production: Opportunities and challenges in African agriculture -- 4. A Smart Aeroponics for Sustainable Agriculture: New Horizon and Use Cases -- 5. Mitrika: An IoT-based fertilization, watering, and crop health monitoring system for Precision Agriculture -- 6. AgriCloud: A Cloud-Based Framework for Scalable Crop Monitoring and Intelligent Decision Support -- 7. Remote sensing applications for precision farming -- 8. AI Technologies in Agriculture: Transforming Farming with Intelligent

Solutions -- 9. Smart Greenhouses and Controlled Environment Agriculture -- 10. Machine vision and Deep learning for Smart Agriculture -- 11. Revolutionizing Indian Agriculture: The Role of Mechanization and Emerging AgriTech Innovations -- 12. Data Analytics and AI in Agribusiness -- 13. Agriculture 6.0: Smart and Sustainable Innovations Shaping the Future of Farming -- 14. Deep Learning for Precision Agriculture: Predicting Crop Yields in a Changing Climate -- 15. Sustainability and Environmental Impact of AgriTech Solutions -- 16. Digitalization in Smart Farming -- 17. Digitization in Smart Farming: Revolutionizing Agriculture -- 18. Blockchain Technology in Agrifood Supply Chains -- 19. Artificial Intelligence Technologies in Agriculture -- 20. Cropify - An Intelligent System for Crop Recommendation and Disease Identification.

---

## Sommario/riassunto

This book explores how modern technologies are changing the way we farm and produce food. It brings together a wide range of smart farming tools and digital solutions that are shaping the future of agriculture. The book covers both the opportunities and challenges that come with using technology in farming and offers practical solutions. The chapters begin with an introduction to the AgriTech revolution and the basic concepts of agricultural technology. It then explores precision agriculture and how computer vision, IoT, and artificial intelligence are helping farmers improve productivity. Readers will also learn about robotics, automation, data analytics, and data visualization in agriculture. Other chapters discuss the role of blockchain in the supply chain, remote sensing, and smart greenhouses. The final chapters focus on sustainability and future trends in AgriTech. This book is a valuable resource for students, researchers, academicians, and professionals who want to understand how advanced technologies are applied in modern farming. It will also benefit those interested in building solutions for digital agriculture and smart farming systems.

---