
Future AgriFields: AI Innovations Reshaping Agriculture

Contents

Editors Biography	iii
Preface	vi
Chapter 1: UAV Technology in Precision Agriculture	1
Introduction.....	1
Leveraging UAV Technology in Precision Farming.....	2
Recommendations.....	3
Conclusion.....	3
Chapter 2: Evolutionary Processes in Crop Species Enhanced by Agritech	6
Introduction.....	7
The Evolution of Crop Genetics.....	7
Recommendations.....	8
Conclusion.....	9
Chapter 3: Biosensors on the Field: Early Disease Detection in Crops	11
Introduction.....	12
Early Disease Detection in Crops.....	12
Recommendations.....	14
Conclusion.....	14

Chapter 4: Farming in the Cloud Computing Applications in Agriculture.....	17
Introduction	17
Cloud Computing Applications in Agriculture.....	18
Recommendations.....	20
Conclusion.....	21
Chapter 5: Sustainable Agriculture and Renewable Energy Integration	24
Introduction	25
Renew able Energy Solutions for Farms	25
Recommendations.....	28
Conclusion.....	28
Chapter 6: Policy and Regulation Navigating the AgTech Landscape	31
Introduction	32
Navigating the AgTech Landscape	32
Recommendations.....	34
Conclusion.....	35
Chapter 7: Human-Machine Collaboration: Augmented Reality in Agriculture	37
Introduction	37
Augmented Reality in Agriculture	38
Recommendations.....	40
Conclusion.....	40

Chapter 8: Urban Agriculture and Food Security	43
Introduction	44
Innovative Hydroponics and Vertical Farming	44
Recommendations	46
Conclusion.....	46
Chapter 9: Future Crops: Edible Insects and Alternative Protein Sources	49
Introduction	50
Edible Insects and Alternative Protein Sources	51
Recommendations	51
Conclusion.....	52
Chapter 10: Farm-to-Table Tech: Traceability and Transparency in Food Production	54
Introduction	54
Traceability and Transparency in Food Production	55
Recommendations	57
Conclusion.....	58
Chapter 11: Blockchain and Smart Contracts in Agriculture	60
Introduction	61
Financial Innovations for Farmers.....	62
Recommendations	63
Conclusion.....	63

Chapter 12: Water Wisdom Innovations in Irrigation Systems	65
Introduction	66
Water Wisdom Innovations in Irrigation Systems	66
Recommendations.....	68
Conclusion.....	69
Chapter 13: Crop Resilience: Genetic Engineering and CRISPR in Agriculture	71
Introduction	72
Genetic Engineering and CRISPR in Agriculture	72
Recommendations.....	74
Conclusion.....	75
Chapter 14: Beyond Pesticides: Sustainable Pest Management in AgTech	78
Introduction	79
Sustainable Pest Management.....	79
Recommendations.....	82
Conclusion.....	82
Chapter 15: Monitoring of Soil Health in Digital Age	85
Introduction	86
Soil Health in the Digital Age: Leveraging IoT Technology	86
Recommendations.....	89
Conclusion.....	90

Chapter 16: Climate-smart Agriculture Solutions	92
Introduction	93
Internet of Things powered Climate smart Agriculture Solutions	93
Recommendations	96
Conclusion.....	96
Chapter 17: Smart Sensors and IoT Devices for Precision Agriculture	99
Introduction	100
Precision Farming and IoT Integration.....	100
Recommendations	101
Conclusion.....	102
Chapter 18: Harvesting Data Big Data Analytics in AgTech	104
Introduction: Blockchain in Healthcare.....	105
Big Data Analytics in Agritech.....	105
Recommendations	106
Conclusion.....	107
Chapter 19: Automation and Robotics in Agriculture: The Emergence of Smart Farms	109
Introduction: Robotic Surgery.....	109
Automation and Robotics in Agriculture	110
Recommendations	111
Conclusion.....	112

Chapter 20: [Farm to Table Blockchain in Agricultural Supply Chains](#) 114

 Introduction 115

 Blockchain Integrated Agri Food Supply chain..... 115

 Recommendations..... 116

 Conclusion..... 116

Visit <https://journals.icapsr.com/index.php/wlp>
Free access to tables of contents and abstracts.