

## About the Book

The world of agriculture is rapidly evolving, driven by pressing challenges and ground-breaking innovations. In this comprehensive volume, we delve into the most significant trends shaping the future of how we cultivate our lands and feed our growing population. From the revolution of precision agriculture and smart farming technologies to the adoption of sustainable and regenerative practices, this book provides an in-depth exploration of the latest advancements. Discover how big data, AI, and automation are transforming agricultural operations, increasing efficiency, and optimizing yields.

Moreover, we examine the rise of urban and vertical farming, exploring innovative solutions to address food scarcity in urban areas. The book also delves into the expanding realm of alternative protein sources, including plant-based and cultured meat products, addressing the increasing demand for sustainable protein. With contributions from leading experts and researchers in the field, this book offers a well-rounded perspective on the current state and future trajectory of agriculture. Whether you're a farmer, policymaker, student, or simply passionate about the future of food production, this book is an essential guide to navigating the ever-changing landscape of modern agriculture.

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# CURRENT TRENDS in Agriculture (Edition I)



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### Editors :

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Kamble Anand Shankar  
Manjul Kumar  
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Ali R A Moursy

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## PREFACE

Agriculture, the backbone of human civilization, has undergone significant transformations in recent years. As we navigate through the challenges posed by climate change, population growth, and shifting consumer preferences, it is crucial to stay informed about the current trends shaping the agricultural landscape. This book, "Current Trends in Agriculture (Edition I)," aims to provide readers with a comprehensive overview of the latest developments and innovations in the field.

In the following chapters, we will explore a wide range of topics, including precision agriculture, sustainable farming practices, vertical farming, and the integration of technology in agricultural operations. We will also delve into the evolving consumer demands for organic and locally sourced produce, as well as the impact of global trade and policies on the agricultural industry.

Through in-depth analysis and expert insights, this book will shed light on the challenges and opportunities facing modern agriculture. From the adoption of data-driven decision-making tools to the development of resilient crop varieties, we will examine the strategies being employed to enhance productivity, profitability, and environmental sustainability.

Whether you are a farmer, an agribusiness professional, a policymaker, or simply someone interested in the future of food production, this book will provide you with valuable knowledge and perspectives on the current state of agriculture. By understanding these trends, we can collectively work towards building a more resilient, efficient, and sustainable agricultural system that can feed the growing global population while preserving our planet's resources for generations to come.

**Happy reading and happy gardening!**

**Authors.....☒**

## About the Editors



**Dr. Kamalkant Yadav**, born into a humble farmer family in the serene village of Kutubpur, Uttar Pradesh, began his academic venture as an Assistant Professor at Galgotias University in 2022. His educational odyssey is a testament to his dedication to agricultural studies. He completed his early education in his hometown and attained a Bachelor's degree in Agriculture from CSAUA&T, Kanpur, in 2017. Subsequently, he pursued a Master's degree at GBPUA&T Pantnagar, Uttarakhand, and achieved his Doctorate in Agronomy, specializing in nutrient management for grain legumes and cereals, at the same institution. Dr. Yadav's unwavering commitment is exemplified by his stellar academic achievements, including double NET, JRF, and SRF accolades from the Indian Council of Agricultural Research. His research focuses on enhancing resource utilization efficiency for sustainable crop production, with notable contributions in national and international journals and book chapters. He has also mentored students, shaping the future of agricultural science. Dr. Kamalkant Yadav's journey reflects dedication and scholarly accomplishments that continue to impact agriculture positively. Till now he has published many research papers, abstract in national and international Conferences and trainings, book chapters and review article. He has received Best Ph.D. Thesis Award, Young Researcher Award , Excellence in Teaching Award, Young Research Award and Best Oral presentation Award from recognized societies.



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