



Vol II

Current Trends and Advances in Agricultural Sciences

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Editors

- Ms. R. Manisha
- Dr. Sujeet Deshmukh
- Khushboo Yadav
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CURRENT TRENDS AND ADVANCES IN AGRICULTURAL SCIENCES

Volume II

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PREFACE

"**Current Trends and Advances in Agricultural Sciences Vol. 2**" offers a captivating journey through the forefront of agricultural research and innovation. Through its diverse array of chapters, the volume provides a comprehensive exploration of emerging trends and advancements shaping the agricultural landscape. The chapter on Nano DAP introduces readers to the revolutionary potential of nanotechnology in fertilizer production. By harnessing the unique properties of nanoparticles, this chapter explores how Nano DAP enhances nutrient uptake efficiency, reduces environmental impacts, and improves crop yields, paving the way for sustainable agricultural practices. Contract farming emerges as a pivotal mechanism for agricultural development in another chapter. Readers are immersed in the intricacies of contractual agreements between farmers and agribusinesses, examining their role in improving market access, technology adoption, and income generation for smallholder farmers. Sericulture, the practice of silk production, takes pivotal position in this volume, offering insights into its historical significance, technological advancements, and economic implications. From silkworm rearing techniques to silk processing methods, this chapter provides a comprehensive overview of sericulture's contribution to rural livelihoods and global textile industries. Genome editing emerges as a transformative tool in agricultural biotechnology, unlocking new avenues for crop improvement and trait enhancement. Polyploidy, the phenomenon of possessing multiple sets of chromosomes, is examined in depth, shedding light on its role in crop domestication, evolution, and breeding. This chapter elucidates how polyploid crops exhibit enhanced genetic diversity and resilience, offering novel opportunities for crop improvement in the face of climate change. Beekeeping and biopesticides round out the volume, highlighting the crucial roles of pollinators and eco-friendly pest management strategies in sustainable agriculture. From the benefits of beekeeping for biodiversity conservation to the efficacy of biopesticides in pest control, readers gain insights into holistic approaches to agricultural production. Therefore, "Current Trends and Advances in Agricultural Sciences Vol. 2" stands as an indispensable resource for researchers, educators, and policymakers seeking to stay abreast of the latest developments in agricultural sciences. With its interdisciplinary approach and forward-thinking perspective, this updated volume serves as a catalyst for innovation and sustainability in global food systems.

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