

Sustainable Agronomic Practices for Global Food Security

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VITAL BIOTECH PUBLICATION

Kota, Rajasthan, India

<http://www.vitalbiotech.org/bookpublication/>

An International Publishers

VITAL BIOTECH get Accredited by following International organization



<https://www.portico.org/publishers/vital/>

101 Greenwich Street, 18th Floor
New York, NY 10006

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Published by Vital Biotech Publication

First Edition: 2026

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Product Form:

Digital download, online and hard bound

Edition:

ISBN: 978-93-48793-09-6

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Printed at: Vital Biotech Publication, Kota

Preface

Ensuring global food security in the face of climate change, population growth, shrinking natural resources, and environmental degradation is one of the greatest challenges of the twenty-first century. The book, *Sustainable Agronomic Practices for Global Food Security*, is intended to provide a comprehensive understanding of innovative and environmentally responsible agronomic approaches that can enhance agricultural productivity while preserving ecological balance.

Sustainable agronomy emphasizes the efficient use of soil, water, nutrients, and energy resources to achieve long-term agricultural resilience. Modern farming systems must not only increase crop yields but also address issues such as soil degradation, biodiversity loss, greenhouse gas emissions, and water scarcity. Practices such as conservation agriculture, integrated nutrient management, precision farming, crop diversification, organic amendments, and climate-smart agriculture have emerged as essential strategies for sustainable food production.

This volume brings together contributions from researchers, academicians, and agricultural professionals to present current advancements and practical insights in sustainable agronomic management. The chapters cover a broad range of topics including soil health, resource conservation technologies, sustainable cropping systems, digital agriculture, and adaptive strategies for climate resilience.

The editors hope that this book will serve as a valuable resource for students, scientists, policymakers, extension workers, and farming communities worldwide. By integrating scientific knowledge with practical applications, it aims to support sustainable agricultural development and strengthen global food and nutritional security.

We express our sincere gratitude to all contributors and reviewers for their valuable efforts in making this publication possible.

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Dr. Gaurav Verma

Dated - 30 April, 2026

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