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Sustainable Agriculture:

An Update

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Prof. Saba Siddiqui
Dr. Deepti Srivastava



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SUSTAINABLE AGRICULTURE: AN UPDATE

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TABLE OF CONTENTS

S. NO.	TOPIC	PAGE NO.
1.	Introduction to Sustainable Agriculture: Economic and Environmental Impact <i>Ruqaiya Bano</i>	1 - 18
2.	Propagation and Nursery Management for Sustainability <i>Muzeev Ahmad</i>	19 - 28
3.	Role of Biofertilizer in Sustainable Agriculture <i>Dr Pallavi Srivastava</i>	30 - 42
4.	Integrated Nutrient Management for Sustainable Agriculture <i>Khalid Habib and P. Smriti Rao</i>	43 - 55
5.	Integrated Pest Management for Sustainable Agriculture <i>Kalpana Bisht and Sunil Kumar Yadav</i>	56 - 75
6.	Organic farming of field crops for sustainability <i>Dr Abhineet</i>	76 - 137
7.	Organic farming of Horticultural crops for sustainability <i>Sanket Kumar</i>	138 - 171
8.	Precision Agriculture: An update <i>Ambreesh Singh Yadav</i>	172 - 190
9.	Role of Agroforestry for Sustainability <i>Dr Ayush Bhushan</i>	191 - 254

10. The role of Extension Education in Sustainable Agriculture 255 - 269
Akanksha Singh and Sunil Kumar
11. Soil microbial diversity and agricultural sustainability 270 - 288
Faria Fatima, Saba Siddiqui
12. Sustainable Agriculture and Climate Change 289 - 304
Nitish Kumar
13. Innovations and Future Directions in Sustainable Agriculture 305 - 233
Sunil Kumar, Mustafa Hussain

CHAPTER -4

Integrated nutrient Management for Sustainable Agriculture

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Abstract

Maintaining soil fertility requires balanced utilization of both inorganic and organic nutrient sources. With the increasing food demands of the global population and the imperative for environmentally friendly agricultural practices, there is a need for careful consideration in enhancing crop productivity. Integrated Nutrient Management (INM) has emerged as a crucial approach for addressing these challenges. INM has the unique ability to enhance plant performance and resource efficiency while ensuring environmental sustainability and quality. This chapter explores the concepts, objectives, techniques, principles, and applications of INM in agriculture. Studies have consistently shown that INM can increase crop yields by 8-150% compared with conventional practices. Moreover, it enhances water-use efficiency, improves farmers' economic returns, and enhances grain quality, soil health, and overall sustainability. Various methods and assessments for expediting the adoption of INM are being discussed. Accumulating evidence strongly suggests that INM represents a novel and environmentally friendly approach to achieving globally sustainable agriculture.

Keywords: organic fertilizers, biofertilizers, yield, food security, chemical fertilizers, etc.