

Advances in Agroforestry for Environmental Sustainability

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Preface

Agroforestry has emerged as a vital land-use system that harmonizes agricultural productivity with environmental stewardship. The book, *Advances in Agroforestry for Environmental Sustainability*, seeks to present contemporary developments, scientific insights, and practical innovations that highlight the role of agroforestry in addressing global environmental challenges.

In the face of climate change, land degradation, biodiversity loss, and resource scarcity, agroforestry offers resilient and sustainable solutions. By integrating trees with crops and livestock, it enhances soil fertility, conserves water, improves carbon sequestration, and supports ecosystem services while maintaining economic viability for farmers. Recent advances in research and technology have further strengthened the effectiveness and adaptability of agroforestry systems across diverse agroecological regions.

This volume brings together contributions from researchers, practitioners, and policy experts to provide a multidisciplinary perspective on agroforestry. It covers key themes such as system design, species selection, carbon dynamics, climate resilience, soil health improvement, and socio-economic impacts. Emphasis is placed on bridging scientific research with field-level applications and policy frameworks.

The book is intended for students, researchers, environmentalists, policymakers, and development professionals engaged in sustainable land management. By integrating traditional knowledge with modern scientific approaches, it aims to promote innovative practices that support ecological balance and long-term sustainability.

The editors express their sincere appreciation to all contributors and reviewers for their valuable efforts. It is hoped that this book will serve as a meaningful resource and inspire further research and action toward sustainable environmental management through agroforestry.

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Dr. Pulakabha Chowdhury
Dr. Nisha Singh
Ms. Rupali Sharma
Dr. Sarita Singh

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