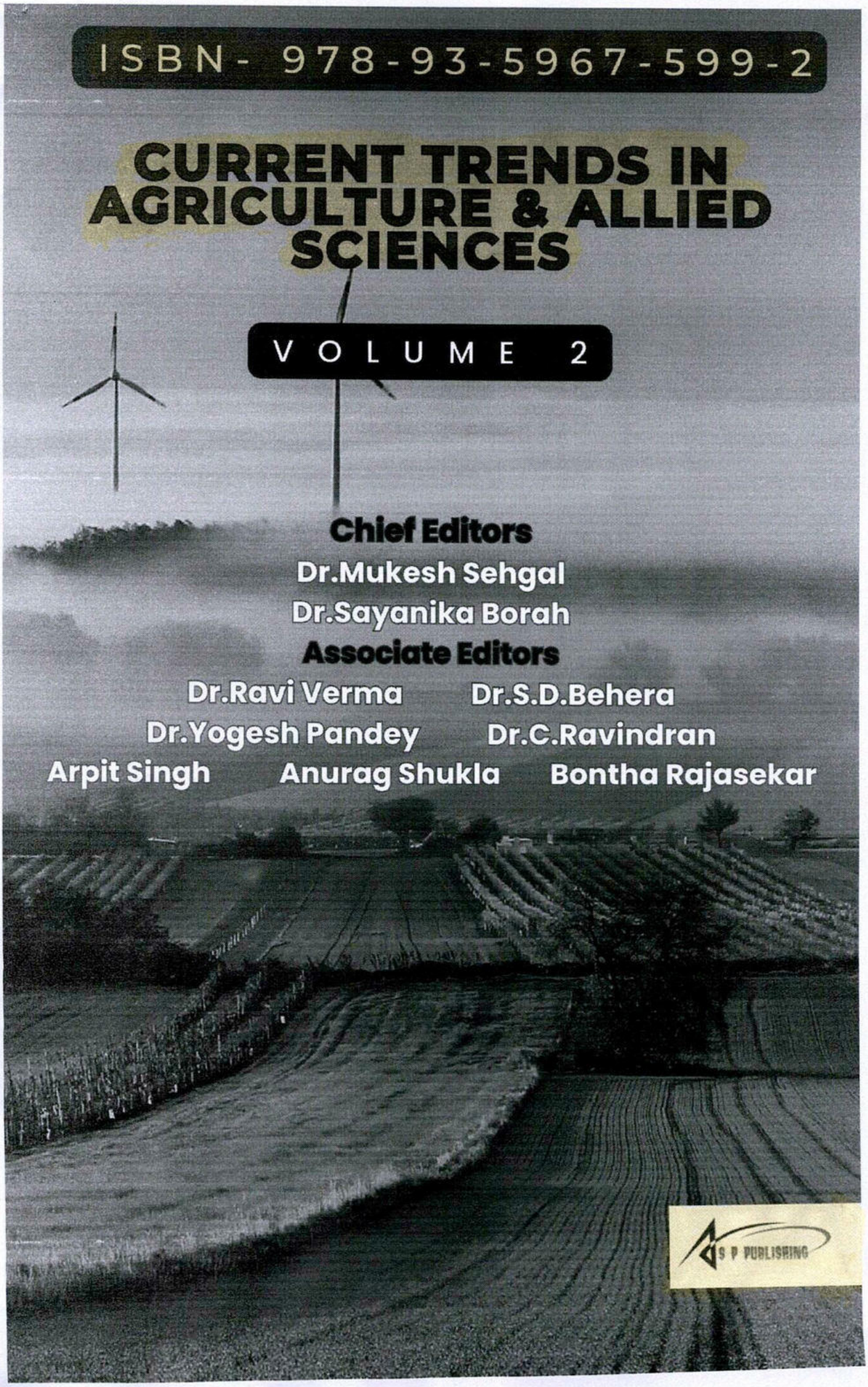
ISBN- 978-93-5967-599-2

CURRENT TRENDS IN AGRICULTURE & ALLIED SCIENCES

VOLUME 2



Chief Editors

Dr.Mukesh Sehgal

Dr.Sayanika Borah

Associate Editors

Dr.Ravi Verma Dr.S.D.Behera

Dr.Yogesh Pandey Dr.C.Ravindran

Arpit Singh Anurag Shukla Bontha Rajasekar

S P PUBLISHING

S.N	Book Chapter and Author(s)	Page No.
29.	**CLIMATE SMART AGRICULTURE SYSTEMS: A WAY FORWARD** Meghali Nath, Sayanika Borah and Dolica Brahmacharimayum, H.C. Kalita	320-325
30.	**A STUDY ON AGRICULTURAL AUTOMATION-A SMART FARMING** Pavithra K and Harisha R	326-329
31.	**Crop Residue Management** Ravi Verma, Rahul Verma, Ashish Kumar Verma, Arpit Singh	330-348
32.	**Soil and water management: optimizing resources for sustainable Agriculture** Ashish Kumar Verma, Rahul Verma, Ravi Verma, Arpit Singh	349-357
33.	**Seeds of sustainability: Solar Powered Farming and Agrivoltaic Farming** Sandesh Kumar, Dr.Anjali Patel, Darshan, and Naseeb choudhary	358-368
34.	**Description, uses and Value-Added Products of Moringa** Dr. Priyanka Gurjar, Dr. Varsha Uikey	369-376
35.	**Farm Automation: An AgTech Revolution** Rohit Kumar Mishra, Anu Gautam, Akhilesh Kumar Lakra and Dr. Anjali Patel	377-384
36.	**Drones and Robotics in Agriculture and Smart Packaging Technology** Prof.D.P. Rai	385-397
37.	**Environmental Impact of Agriculture, Climate Resilient Agriculture** Kaberi Gogoi, Dr. Sayanika Borah	398-405
38.	**Expunge Unseen Inanition through Nutrition-Sensitive Approach in Agriculture** Ms. Pallavi Saikia, Dr. Pallavi Deka,Ms. Pallabi Das	406-413
39.	**Fertigation – Paving Way towards Sustainable Agriculture** Aminullah Norzai, K. Bhavya Sree, K. Suresh and P. Bindu Priya	414-424
40.	**Food Processing Technology, Storage and Post Harvest Management of Vegetables** S. Hima Bindu and Bontha Rajasekar	425-432

CHAPTER 30

A STUDY ON AGRICULTURAL AUTOMATION-A SMART FARMING

[1]Pavithra K and [2]Harisha R

[1]Assistant Professor, School of Commerce, St. Francis De Sales Degree College,
[2]Principal, Shree Sharada International PU College

Abstract

The development of the Agricultural Automation System aims to reduce labor and improve socio-economic conditions. Artificial intelligence can provide solutions to processes involved in seed sowing and harvesting, leading to increased efficiency and productivity. Currently, there is a shortage of professional manpower in the agricultural sector, which adversely affects the economy of the country. This is the primary reason for automating the agriculture sector. In India, 70% of the population is dependent on agriculture. Food is a basic necessity and improving the farming process is the only way to increase food production. To produce enough food, we must find ways to make agriculture easier, time-saving, and computerized.

In the past, over 60% of the population was involved in farming, but the current scenario is different. Nowadays, people are more inclined towards towns because farming is not an easy task and farmers don't earn enough through farming. Recent statistics show that the growth rate of farmers in India has slowed down over the last decade, leading to a fall in rice production. By automating agricultural processes, people can easily monitor the cultivation process from time to time, even when they are not available in the field.

In this study, we explore the concept of agricultural automation and its implementation in the form of smart farming. Smart farming involves the use of modern technologies such as sensors, drones, and artificial intelligence to optimize agricultural processes. By automating various tasks, farmers can save time, reduce costs, and increase yields. This study looks at the benefits of smart farming and its potential impact on the agricultural industry.

CHALLENGES IN AGRICULTURE

1. Demand and supply gap-The fast-food industry's excessive availability of unhealthy meals has led to a surge in demand for healthier food products among consumers. The harmful effects of unhealthy food on our bodies have resulted in a "back to basics" approach, with people all over the world craving plant-based wholesome food. To meet the