# UTILITY OF RS, GIS AND GPS IN AGRICULTURE AND ALLIED SCIENCES

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# Preface

The field of agriculture is currently experiencing a technological revolution, with remote sensing, GIS, and GPS playing a pivotal role in this transformation. By utilizing these technologies to gather extensive data from various sources such as land, air, and space, remote sensing provides farmers and researchers with unprecedented insights into crop growth, soil moisture levels, and weather patterns. These valuable insights enable farmers to make more informed decisions, optimize their yields, and minimize their environmental impact. The integration of remote sensing, GIS, and GPS has been instrumental in the field of agriculture and crop management, allowing for local, regional, and even global scale estimation and analysis. This has been made possible through the simultaneous development of crop models and remote sensing techniques.

The book titled "Utility of RS, GIS and GPS in Agriculture and Allied Science" serves as a comprehensive guide to the current state of remote sensing, geographic information system and global position system in agriculture allied science fields. It thoroughly explores the latest scientific advancements and their practical applications in innovative solutions for farmers. The book covers a wide range of topics, including satellite farming, machine learning, big data, and the integration of remote sensing with other precision agriculture technologies. One of the most exciting aspects of remote sensing is its ability to support sustainable and efficient agricultural practices. The book dedicates sections to how remote sensing, GIS and GPS is being utilized to enhance crop yield, reduce water and fertilizer usage, detect and manage pests and diseases and natural resources management. It

also emphasizes the potential of remote sensing in supporting precision conservation and precision farming.

This book is an essential resource for researchers, practitioners, and policymakers alike. Whether you are a farmer seeking to improve your crop management techniques or a researcher working towards groundbreaking advancements in precision agriculture, this book serves as an indispensable guide to the current state of remote sensing in precision agriculture. We firmly believe that this book will prove to be an invaluable resource for anyone involved in the field.

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