



sustainability



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Sustainable Agricultural, Biological, and Environmental Engineering Applications

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Sustainable development in the agriculture sector is crucial to achieve the 2030 Sustainable Development Goals (SDGs) set by the United Nations (UN). There are lots of challenges to developing modern and intelligent agricultural techniques, tools, and systems, by which sustainable agriculture and food security can be satisfied. In addition, carbon-neutral development and clean energy utilization are also associated with the UN-SDGs. Such agricultural, biological, and environmental engineering studies are needed in the 21st century, particularly from the viewpoint of the agricultural water–energy–food security nexus. This book focuses on the recent proliferation and technological advancements in these engineering applications. This book aims to share recent updates on agricultural, biological, and environmental engineering, and the application of these engineering techniques in the agriculture sector. It presents such engineering technologies and applications in seven categories that include energy system applications in agriculture (three studies); irrigation and drainage (four studies); biomass, biogas, and biochar (three studies); farm mechanization and soil science (three studies); remote sensing and geographical studies (two studies); wastewater and biological studies (two studies); and case studies and societal aspects in agriculture (five studies). The editors believe that this book will be useful for agricultural scientists, researchers, and students.



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