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Special Issue Reprint

Engineering of Smart Agriculture

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This Special Issue presents an extract from the reality of smart agriculture, where the combination of modern technologies, innovative solutions, and sustainable approaches to food production classifies this part of science as highly interdisciplinary, multifaceted, and technologically advanced. The need to increase productivity, optimize natural resources, and minimize environmental impact requires new approaches. In this context, smart agriculture is emerging as a solution that combines technology, data, and science to achieve sustainable, efficient, and innovative food production. This Special Issue introduces the field of smart farming, which encompasses a range of advanced technologies. The use of these tools allows for the monitoring and optimization of crop conditions, precise fertilization, the minimization of water and energy usage, and the improvement of crop quality and quantity. In addition, plant monitoring systems are described, which, by means of sensors and data analysis, provide farmers with valuable information about plant health, soil moisture, temperature, and other factors affecting crop growth. A significant part of this monograph deals with the automation of agricultural processes, where robots and machines undertake tasks with high precision and accuracy, contributing to the farmer's efficiency. This Special Issue aims not only to provide an understanding of smart agriculture but to also inspire the reader to think about the future of agriculture and the ways in which modern food production methods can be improved.

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