

Special Issue

Sky Guardians of Agriculture: Drones for Efficient Plant Health Surveillance

Message from the Guest Editors

Modern agriculture faces mounting pressures from climate change and food security demands, necessitating transformative approaches to crop management. Drones, having evolved from basic imaging tools to sophisticated agricultural assets through advances in sensors, artificial intelligence, and automation, now offer unprecedented capabilities for plant health surveillance. This Special Issue compiles cutting-edge research on drone systems designed for efficient, scalable monitoring; diagnosis; and management of plant health across diverse agroecosystems. We seek original research and reviews demonstrating innovations in hyperspectral, multispectral, thermal infrared phenotyping, AI-driven biotic/abiotic stress detection, real-time data processing, autonomous scouting, sensor fusion, and farm management integration. Contributions must exhibit scientific rigor and practical relevance, focusing on early stress detection, precision disease management, nutrient monitoring, health-linked yield prediction, and surveillance efficiency optimization. Submissions covering novel methodologies, validation frameworks, and field-to-algorithm translation are particularly encouraged.

Guest Editors

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Deadline for manuscript submissions

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Editor-in-Chief

Prof. Dr. Leslie A. Weston

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