MAY 2026
SPECIAL ISSUE

AGRONOMY RESEARCH

SMART AGRICULTURE–ENERGY SYNERGIES: INTEGRATING AGRICULTURAL ENGINEERING, BIOENERGY, AND RENEWABLE ENERGY

ABOUT THE SPECIAL ISSUE

Global demand for sustainable food and energy systems is expanding at an unprecedented rate due to population growth, urbanization, climate change, and the urgent need to reduce fossil fuel use. In addition to food and raw materials, agriculture creates renewable energy and mitigates climate change. At the same time, energy systems use agricultural resources, residues, and innovations for global sustainability targets.

Agriculture and energy are linked by technology to improve output, resource efficiency, and environmental protection. Advances in precision agriculture, bioenergy technologies, renewable energy integration, and digital tools are making farming systems smart, robust, and resource-efficient. These developments enable circular economy practises that turn agricultural waste into energy while protecting the environment and economy.

Agricultural engineering is driving smart, efficient, and flexible systems that incorporate modern mechanization, renewable energy solutions, and intelligent digital platforms. Agriculture engineers design resilient food–energy systems that can withstand climate change and resource constraints by using energy-efficient farm technology and solar, wind, and bioenergy solutions.

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DEADLINE FOR FULL PAPERS SUBMISSION:

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This special issue explores the synergies between agriculture, engineering, and renewable energy to address pressing global challenges. It welcomes new ideas, interdisciplinary approaches, and the revolutionary potential of AI, ML, robots, and smart sensing. This issue aims to contribute to the global effort to build sustainable, climate-smart, and energy-efficient agricultural systems.

All types of original submissions including research articles, case studies and, reviews are welcome.

TOPICS:

- Agricultural engineering innovations for sustainability
- Bioenergy production and utilization
- Renewable energy technologies
- Smart farming solutions: AI, ML, IoT, and data-driven approaches
- Energy-efficient farm and production systems
- Sustainable land and water management for energy–agriculture integration
- Circular economy practices in agriculture and bioenergy
- Environmental impacts, carbon footprint, and mitigation strategies
- Climate change adaptation and resilience through integrated systems

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