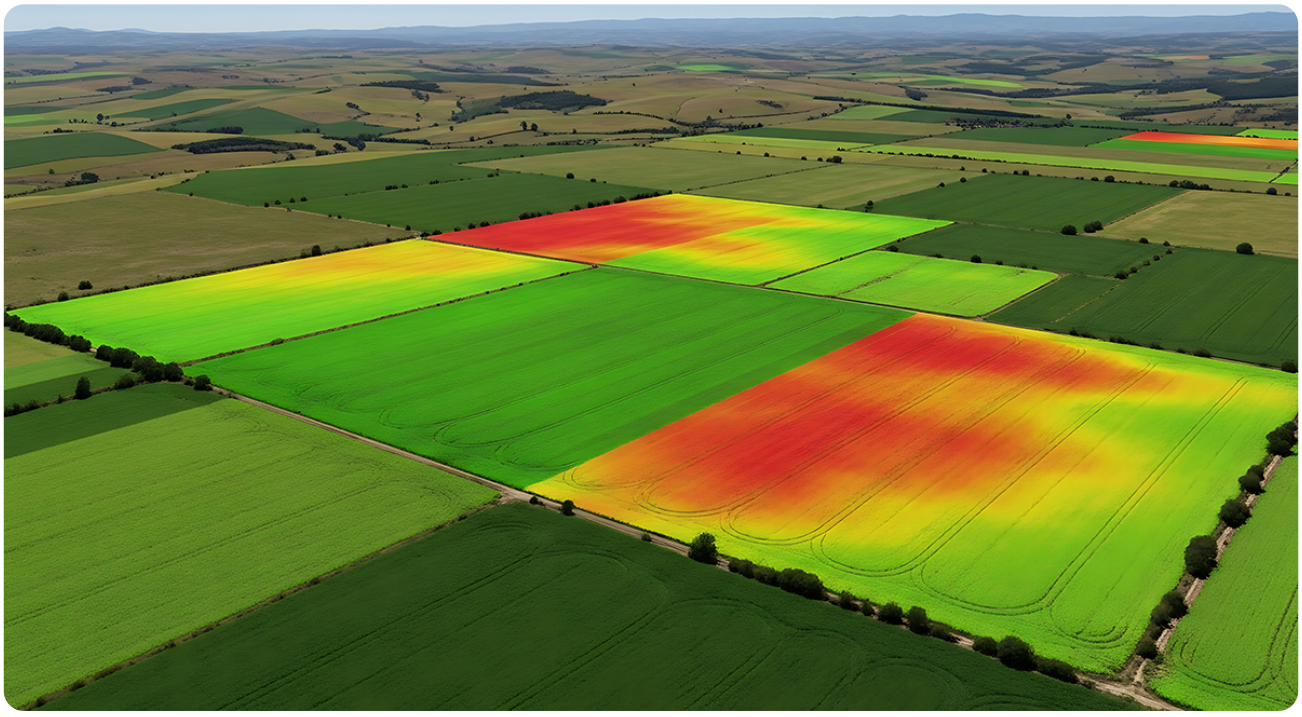
Science Societies

# Call for papers: Earth observation, sensors, and artificial intelligence for crop and environment monitoring

## Submission deadline: Oct. 31, 2026

May 18, 2026



With the rapid advancement of earth observation (EO) technologies, including optical and non-optical systems such as synthetic aperture radar (SAR) and Light Detection and Ranging (LiDAR), as well as a wide range of ground-based and in-situ sensors, agricultural systems are now richer in data than ever before. These diverse data streams enable the collection of large, high-resolution datasets that can support a variety of critical decisions. Coupled with recent breakthroughs in data analytics, machine learning, and artificial intelligence, these datasets can now be transformed into actionable insights for multiple decisions, such as crop yield prediction, nutrient and input management, variable seeding rate determination, early detection of pest and disease outbreaks, and monitoring of natural disasters such as storm, wind, hail, and flood damage and environmental stressors such as drought. Together, EO, sensors, and artificial intelligence (AI) are reshaping the landscape of modern agriculture and environmental monitoring by providing scalable, timely, and data-driven decision support.

*Agronomy Journal* is inviting submissions to a special section on "Earth Observation, Sensors, and Artificial Intelligence for Crop and Environment Monitoring." The purpose of the special section is to highlight recent advances in the use of EO, sensor-based technologies, and AI for monitoring crops, soils, and environmental conditions across diverse agricultural and ecological landscapes. With the rapid expansion of EO platforms (optical, SAR, LiDAR), UAV systems, and in-situ sensors, coupled with breakthroughs in data analytics and machine learning, agriculture and environmental monitoring are undergoing a transformative shift toward data-driven decision-making.

The journal invites submissions that present cutting-edge research, innovative methodologies such as multisource data fusion, and integrative frameworks that use

EO, sensors, and AI to advance crop and environmental monitoring at field, regional, and global scales. Studies spanning different crops, ecosystems, and agroecological zones are welcome.

The deadline for submissions is Oct. 31, 2026. Learn more.

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