

Special Issue

Design and Optimization of Intelligent Planting Machinery

Message from the Guest Editors

This Special Issue's purpose is to provide and discuss new technologies that affect the quality of mechanized crop planting, aiming to improve the efficiency, reliability, and the crop yield per unit area. It focuses on the design, optimization, and application of intelligent seeding and transplanting machinery for grain, oil, and horticultural crops, and invites high-quality interdisciplinary research covering basic theories and new optimization technologies, as well as the R&D of key components, detection and control systems, and integrated machinery. Topics of interest include, but are not limited to:

- Seedbed preparation;
- Application of bionics in soil-engaging components;
- High-speed precision seeding;
- Drilling equipment;
- Elimination of straw obstacles in no-till seeding;
- Seedling raising and transplanting in paddy fields;
- Seedling raising and transplanting in dryland;
- Precision fertilization;
- Quality detection of seeding and transplanting;
- Detection of operating environment for seeding and transplanting;
- Adaptive control of operating parameters for seeding and transplanting equipment;
- Variable-rate fertilization and seeding;
- Seeding and transplanting robots.

Guest Editors

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Editor-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 20.6 days after submission; acceptance to publication is undertaken in 5.4 days (median values for papers published in this journal in the first half of 2025).