

Special Issue

Precision Feeding, Digital Twins and Decision-Support Systems for Livestock Production

Message from the Guest Editor

The rapid evolution of sensing technologies, data analytics, and modeling approaches is transforming livestock production systems toward more precise, efficient, and sustainable management. Precision feeding systems, supported by advances in digital agriculture and agricultural engineering, now enable the integration of animal-level information with nutritional, environmental, and management data to optimize resource use and animal performance under increasingly variable production conditions.

The focus of this Special Issue is on innovative technologies and engineering-based approaches that support precision feeding and decision-making in livestock systems, with particular emphasis on ruminant production. Emphasis is placed on systems that improve feed efficiency, reduce environmental impacts, enhance animal welfare, and support adaptive management under climatic and operational uncertainty. Contributions are encouraged that combine biological understanding with technological development, including sensing, data integration, and analytical frameworks. Both experimental and applied studies, as well as methodological and review papers, are welcome.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

AgriEngineering (ISSN 2624-7402) is an international open access, open-source, and cross-disciplinary scientific journal on the engineering science of agricultural and horticultural production. Our aim is to encourage scientists to publish their experimental and theoretical research, along with the full set of schematics, source-code, and mechanical design models leading to accelerated and rapid dissemination of leading-edge technologies emerging in agricultural, environmental, and agronomic engineering. *AgriEngineering* publishes articles, technical notes, reviews, commentaries, and case/field reports, as well as Special Issues on particular subjects.

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