

## Special Issue

# Application of Vision Technology and Artificial Intelligence in Smart Farming

### Message from the Guest Editors

From reducing production costs with intelligent automation to boosting productivity, Computer vision (CV) and artificial intelligence (AI) have massive potential to enhance the overall functioning of smart farming. Based on CV and AI, monitoring and analyzing specific behaviors of livestock and poultry in large-scale farms can improve our knowledge of intensively raised livestock and poultry behaviors in relation to modern management techniques. CV approaches are required to extract plant phenotypes from images and automate the detection of plants and plant organs. AI approaches give growers weapons against pests. The application of CV and AI helps crops to progress toward perfect ripeness. This Special Issue focuses on the application of CV and AI in smart farming. Topics of interest include but are not limited to the following: design and optimization of agricultural sensors, behavior recognition of livestock and poultry, automation technology in agricultural equipment, design and optimization of robots for livestock and poultry breeding, non-destructive detection of meat quality, and agricultural big data analytics. Original research articles and reviews are welcome.

---

### Guest Editors

Dr. Xiuguo Zou

Dr. Zheng Liu

Dr. Xiaochen Zhu

Dr. Wentian Zhang

Dr. Yan Qian

Dr. Yuhua Li

---

### Deadline for manuscript submissions

closed (10 July 2023)



## Agriculture

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 4.9



[mdpi.com/si/141089](https://mdpi.com/si/141089)

*Agriculture*  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[agriculture@mdpi.com](mailto:agriculture@mdpi.com)

[mdpi.com/journal/  
agriculture](https://mdpi.com/journal/agriculture)





# Agriculture

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.3  
CiteScore 4.9



[mdpi.com/journal/  
agriculture](https://mdpi.com/journal/agriculture)



## About the Journal

### Message from the Editor-in-Chief

*Agriculture* (ISSN 2077-0472) is an international, crossdisciplinary and scholarly open access journal on the science and technology of crop and animal production, and management of the natural resource base for agricultural production. *Agriculture* is published in an open access format – research articles, reviews and other contents are released on the internet immediately after acceptance. The scientific community and the public have unlimited and free access to the content as soon as it is published.

---

### Editor-in-Chief

Prof. Dr. Les Copeland  
Sydney Institute of Agriculture, School of Life and Environmental  
Sciences, The University of Sydney, Sydney, NSW 2006, Australia

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), PubAg, AGRIS, RePEc, and other databases.

#### Journal Rank:

JCR - Q1 (Agronomy) / CiteScore - Q1 (Plant Science)