

## Special Issue

# Light Requirements of Agricultural Crops

### Message from the Guest Editors

Light and its quality strongly influence plant growth and photosynthesis, and thus affect productivity, plant shape, the color of the leaves, and even the production of secondary metabolites. Traditional farming is extremely climate- and location-dependent, which makes it difficult to grow food without relying on costly shipments from other regions. Lighting provided by electric lamps, especially LEDs, is increasingly being employed in the production of agricultural crops grown in controlled environments. LED technologies have opened up many new opportunities in efficient and effective spectral and intensity control that have never been seen before. The construction of modern lamps and control systems have enabled vertical farming technologies to be developed or the testing of new plant varieties in climate-controlled conditions to be undertaken. Achieving sufficient quantity, daylight, and quality of light are among the most significant objectives in agricultural research when aiming to match plant requirements with cost-effective yields.

### Guest Editors

Dr. Jadwiga Treder

The National Institute of Horticultural Research, Ul. Konstytucji 3 Maja 1/3, 96-100 Skierniewice, Poland

Dr. Anna Kapczyńska

Department of Ornamental Plants and Garden Art, University of Agriculture in Krakow, 29-Listopada 54, 31-425 Kraków, Poland

### Deadline for manuscript submissions

closed (25 March 2024)



## Agronomy

an Open Access Journal  
by MDPI

Impact Factor 3.4  
CiteScore 6.7



[mdpi.com/si/182366](https://mdpi.com/si/182366)

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

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

[agronomy](https://agronomy)





# Agronomy

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.4  
CiteScore 6.7



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



## About the Journal

### Message from the Editor-in-Chief

*Agronomy* draws together researchers from diverse areas of agricultural research with a common aim of enhancing agricultural productivity globally. The journal provides unlimited free access to all those interested in advancing agricultural science from both the research and general community. Papers are released immediately after acceptance through the internet.

*Agronomy* is supported by our authors and their institutes through low article processing charges (APC) for accepted papers. We hope you will support the journal by becoming one of our authors.

---

### Editor-in-Chief

Prof. Dr. Leslie A. Weston

Gulbali Centre for Agriculture, Water and Environment Research,  
Charles Sturt University, Wagga Wagga, NSW 2678, 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, and other databases.

#### Journal Rank:

JCR - Q1 (Agronomy) / CiteScore - Q1 (Agronomy and Crop Science)