

Special Issue

Optimizing Grain Yield and Water Use Efficiency in Maize Production

Message from the Guest Editors

Water shortage is a main factor limiting maize growth and grain yield in arid and semi-arid agricultural areas. Therefore, improving maize yield and water use efficiency has become a difficult and hot issue in current research. Maize grain yield and water use efficiency have been affected by the interaction of genotype, environment, and cultivation measures. Exploiting the drought-tolerant gene to breed new varieties, increasing plant density to improve high grain yield, covering the ground to reduce soil moisture evaporation, and optimizing the irrigation schedule and irrigation method are effective ways to obtain high grain yield and water use efficiency. Revealing the water requirement of maize through molecular, physiological, and phenotypic aspects, and further adopting agronomic and engineering water-saving methods to optimize yield and water use efficiency is the development direction of maize production in arid and semi-arid agricultural areas in the future. This Special Issue will publish recent research that describes the state of the art in research and development on solutions in maize production systems in arid and semi-arid agricultural areas.

Guest Editors

Prof. Dr. Shaokun Li

Institute of Crop Sciences, Chinese Academy of Agricultural Sciences/Key Laboratory of Crop Physiology and Ecology, Ministry of Agriculture, Beijing 100081, China

Dr. Jun Xue

Institute of Crop Sciences, Chinese Academy of Agricultural Sciences, Beijing 100081, China

Deadline for manuscript submissions

closed (15 December 2022)



Agriculture

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 6.3



mdpi.com/si/90041

Agriculture
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
agriculture@mdpi.com

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





Agriculture

an Open Access Journal
by MDPI

Impact Factor 3.6
CiteScore 6.3



[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, cross-disciplinary and scholarly journal on the science and technology of crop and animal production, and management of the natural resource base for agricultural production. We invite submissions from authors according to the aims and scope of the journal described in more detail on this page. *Agriculture* is published in an open access format – articles are published on the journal's website immediately after acceptance, giving the scientific community and the public unlimited and free access to the content.

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)