Special Issue

Improving Nitrogen Use Efficiency in Model and Crop Plants: From Lab to Field

Message from the Guest Editors

Nitrogen (N) availability is one of the major factors limiting plant growth and productivity, being a structural component of amino acids, nucleic acids, and other N-containing biomolecules. To maintain high crop yields for meeting global food demands in intensive agriculture, N fertilizers have been massively applied with a negative impact on the environment and human health. In limited N fertilizer cropping systems, improving the nitrogen use efficiency (NUE) and identifying high-NUE genotypes are important goals for maintaining a high sustainable yield. NUE is a complex multigenic trait, which encompasses the plant's efficiency to absorb (NUpE component), assimilate, transport, and remobilize the available N from the soil (NUtE component). It is governed by interacting genetic and environmental (GxE) factors. NUE improvement might permit solving the trade-off between productivity and environmental impacts. This Special Issue aims to publish the most recent discoveries on phenotyping, mapping quantitative trait loci (QTLs), and selecting candidate genes for NUE improvement in model and crop plants.

Guest Editors

Dr. Maria Rosa Abenavoli

Dr. Francesco Sunseri

Prof. Dr. Agostino Sorgonà

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

mdpi.com/journal/plants

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Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

Editor-in-Chief

Prof. Dr. Dilantha Fernando
Department of Plant Science, University of Manitoba, Winnipeg, MB R3T 2N2, Canada

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