Special Issue

Efficient Water Use and Nutrition Cycling in Paddy Ecosystem

Message from the Guest Editors

Conventional rice cultivation requires 2-3 times more of water than for other cereals, accounting for 34-43% of global irrigation water. In addition, the rapid increase in the application of chemical fertilizers over the past century has greatly benefited rice production. However, fertilizer over-application has led to many environmental problems, including excessive reactive nitrogen losses, greenhouse gas emissions, water eutrophication, groundwater pollution, etc. Managing the supply and utilization of nutrients to sustainably increase rice yields while minimizing impacts on other ecosystem services such as clean water and air, biodiversity, and carbon sequestration represents a significant challenge, especially under water-saving paddy ecosystems. This Special Issue aims to collect novel approaches to measure, model, and efficiently manage irrigated water and nutrient cycling in paddy ecosystems, and the new insights regarding nutrition loss processes and their regulating and controlling mechanisms in paddy ecosystems. This will support the development of sustainable and profitable farming systems.

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Deadline for manuscript submissions

closed (20 December 2022)

Plants

an Open Access Journal by MDPI

Impact Factor 4.0
CiteScore 6.5
Indexed in PubMed

mdpi.com/si/121029

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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

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