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Agroecosystem Modeling

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Message from the Guest Editor

In the past, intensification/overexploitation of agroecosystems with irrigation, agronomic managements, improved crop varieties, agrochemicals and agricultural machinery resulted in enhanced food production. However, due to inaccurate agroecosystem management, problems such as greenhouse gas emissions, erosion, salinization, eutrophication, loss in biodiversity, and insect and pest prevalence are predominantly. Models are a good tool to describe the response of agroecosystems under different sets of biotic and abiotic scenarios. At present, there are different process-based agroecosystem models available that can be used to solve “what if” questions in this era of climate change. These models are helpful in ideotype designing, phenotyping, understanding of Genotype (G) x Environment (E) x Management (M) interactions, crop physiological mechanisms, water and nutrient management, conservation and precision agriculture, insect, pest, and disease forecasting, soil organic carbon dynamics, socioeconomic analysis, and climate impact assessments.



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Message from the Editor-in-Chief

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