

Special Issue

Mathematical Modelling Applications in Crop Ecology and Disease Epidemiology

Message from the Guest Editor

Dear colleagues, Crop ecology encompasses a range of approaches to improving crop productivity and quality, subject to multiple environmental and socioeconomic criteria. A major research component has been crop performance and improvement in relation to the abiotic environment, with mathematical modelling being applied in identifying key physiological determinants. It has proved more challenging to apply mathematical modelling techniques to the biotic interactions manifest in all cropping systems:

- Crop productivity and heterogeneity
- Landscapes-cropping systems
- Crops-natural vegetation/weeds
- Crops-livestock
- Soil microbiology
- Pest/disease epidemiology
- Farmer preferences
- Risk management

This Special Issue places an emphasis on biotic interactions and welcomes novel research, reviews and opinion pieces on the application of mathematical models, interpreted in a broad sense to include simple decision rules, new statistical applications, biophysical models, complex systems, and behavioral analysis.

Guest Editor

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Editor-in-Chief

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