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Modelling Plant Diseases for Precision Crop Protection

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Message from the Guest Editors

Precision crop protection (PCP) is a key component of precision agriculture. Special attention has been paid thus far to the spatial attributes of PCP, exploiting the within-plot variability in the distribution of plant diseases. PCP, however, has a second dimension, which is the time of intervention, which involves moving from calendar- to risk-based applications. Mathematical models are valuable tools for supporting decision-making on whether and when crop management actions are really needed. This Special Issue aims to focus on modelling plant diseases for crop protection purposes. All relevant modelling approaches will be considered, from data-based to process-based models; from a general (e.g., strategic or operational decision making, crop system models) to a specific perspective (e.g., models for specific crops and diseases, models for optimising monitoring activities, predicting disease risk or intervention thresholds and fungicide application). The Special Issue then covers a wide variety of models and modelling approaches or techniques, and has the ambition to provide a wide picture of the potentialities of plant disease models for precision crop protection.



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Special Issue



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Message from the Editor-in-Chief

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