Special Issue

Early Detection of Diseases in Crops for Efficient Application of Pesticides

Message from the Guest Editor

In plant pathology, the causal agent can be identified through visual inspection for characteristic disease symptoms or through laboratory tests. Laboratory tests include isolating and identifying plant disease causal agents using various culture media, as well as diagnostic tests such as PCR and ELISA tests. These techniques are important for identifying biotic factors that may cause disease, but not for abiotic factors such as salinity or micronutrient toxicity that may cause abiotic plant disease symptoms. Diagnosis is crucial for identifying the biotic or abiotic causal agent. One of the first things that a diagnostician should note is how the diseased plants are distributed over the affected area. For example, uniform damage patterns over a large area are generally not associated with biotic agents but are usually due to abiotic causal agents. Therefore, there is a strong interest in the agricultural and horticultural sectors to replace visual inspection and some laboratory techniques with more automated and sensitive approaches for timely interventions and targeted control measures.

Guest Editor

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