

Foliar Diseases and their Non-Chemical Control

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Foliar diseases are found in every cropping system, and occur both before and after harvest. The nature of the growing system as well as the activity of the pathogens influence the susceptibility of plant hosts to diseases. Diseases are influenced by in-crop humidity and other microclimate conditions, by crop management and by stresses imposed on the plant tissues. The role of inoculum sources, especially those carried on propagation material, the development of epidemics and the survival of pathogen inoculum are described. Agro-technical methods for disease suppression are exemplified with methods based on crop aeration, alteration of crop microclimate and control of the nature of irradiation (in greenhouses). Biological control can be practised as some preparations are already in the market for controlling gray mold powdery mildew and other diseases. The role of integration of biocontrol with other control measures is emphasized. Several agents are available for controlling foliar diseases without the use of chemical fungicides: calcium and copper salts, sulfur, bicarbonates, compost extracts and plant extracts. Resistant cultivars, disease warning systems, pathogen monitoring and sanitation should also be used. Post-harvest treatments of fruits and vegetables are detailed.

Key words: Biocontrol, pathogens, foliar, IPM.

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