

**Mini Review**

## **Innovations in Spore Trapping Technologies for Assessment of Fungal Spores Incursions in Crop Environment**

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### **Abstract**

The propagules of fungal pathogens infecting crop plants are mostly dispersed by air and infect other plants in the nearby fields or far away locations. Monitoring of spore incursions in a crop environment carries much significance for prediction of a probable disease attack, if weather conditions remain favourable. Spore traps have been of much help in assessment of incoming fungal spores in a cropped area. Ever since the development of Hirst spore trap, several types of air sampling devices with different spore trapping mechanisms have been developed. New types of spore monitoring methods using air sampling with DNA-based diagnostic tools are emerging for real time assessment of spore incursions. Such early detection devices in air samplings can be used as an effective strategy for ensuring plant biosecurity. The ability to detect and quantify airborne spores can reduce the costs associated with disease control. This review discusses the advances made in spore trapping technologies and their role in averting disease attacks through early warnings.

**Key words:** Air sampling, diagnostics, disease risk, monitoring, spore trapping devices

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