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IMPLICATIONS OF AEROMYCOLOGICAL CHANGES ON SUNFLOWER AND SAFFLOWER YIELD: A CASE STUDY OF SPORE CONCENTRATIONS AND PLANT DISEASE DYNAMICS



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Abstract :

Aeromycological alterations driven by environmental changes significantly affect the yield of crops such as sunflower and safflower. This study aims to investigate the relationship between spore concentrations in the air and the dynamics of fungal diseases in sunflower and safflower crops. Using a combination of Burkard spore trapping, microscopic analysis, and molecular techniques, we identified the dominant fungal pathogens and quantified their spore concentrations. We further analyzed the relationship between spore concentrations, weather conditions, and the

severity of plant diseases. The findings suggest that higher spore concentrations, coupled with conducive weather conditions, contribute to increased disease incidence and severity, leading to yield losses. This paper emphasizes the need for integrated disease management strategies, taking into account aeromycological changes and their implications for crop yield.

Keywords:

Aeromycology, Sunflower, Safflower, Fungal Pathogens, Spore Concentrations, Plant Disease Dynamics, Yield Loss, Disease Management