

INVENTORY OF PATHOGEN ASSOCIATED WITH DISEASE SYMPTOMS ON CACAO PLANTS (*Theobroma cacao* L.) IN GUNUNGKIDUL REGENCY, SPECIAL REGION OF YOGYAKARTA

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ABSTRACT

Cocoa (*Theobroma cacao* L.) is a major plantation commodity contributing significantly to Indonesia's national economy. However, cocoa productivity in several regions, including Gunungkidul Regency, Yogyakarta Special Region, has declined mainly due to plant diseases. This study aimed to inventory, identify, and characterize pathogens associated with disease symptoms on cocoa plants and to analyze disease incidence and severity. The research used a field survey method with purposive sampling in two cocoa fields with different management systems: intensive and non-intensive. Disease symptoms were assessed through visual and microscopic observations, followed by fungal isolation and morphological and molecular characterization. The identified pathogens included *Colletotrichum* sp., *Fusarium* sp., *Acremonium* sp., *Mucor* sp., *Oncobasidium theobromae*, and *Rhizoctonia* sp. Disease incidence and severity differed between the two fields. Based on AUDPC analysis, disease development was consistently higher in the non-intensive field, with VSD and stem canker peaking in August (150% and 139%, respectively), fruit rot showing the highest AUDPC in July (22.1%), and anthracnose reaching its maximum in August (32.785%). These results indicate that inadequate field management contributes to more severe disease progression, highlighting the importance of effective disease management strategies in cocoa plantations.

Keywords : *Theobroma cacao* L., Cocoa Diseases, AUDPC, Fungal Pathogens, Disease Severity