Title: **Phytopathogenic Fungi Causing Leaf Lesions and Vascular Wilt on *Crotalaria* Species in Migori and Embu Counties.**

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Abstract

Crotalaria brievidens and *Crotalaria ochroleuca* are horticultural crops that are largely consumed in western parts of Kenya and other parts of the country. However, this plant, a part from its use as a source of food by man, some fungi attacked them and caused vascular wilt and leaf necrosis. This resulted to a lose up to 100% of the crop yield. This study was therefore conducted to screen for the phytopathogenic fungi from the explants. The study begins with explant pre-sterilization which gets inoculated in PDA and growth monitored after 7 hours. The spores are transferred in sterile PDA which then allow the germination of the isolates. Purification of these isolates was done in PDA and then stored under refrigeration for data collection. The pure isolates were then cultured in triplicates in sterile PDA and the mycelial growth in terms of radial growth and weight were recorded in tables for data analysis. The data collected were analysed by ANOVA and presented in graphs. The morphological data based on cultural characteristics were also tabulated and microscopic examination used to identify the spore forming and discover the hyphael structure. In a parallel experiment, the substrate utilization was done to screen for the enzymes produced by these phytopathogenic fungi. The study ends with the identification of the isolates responsible for the vascular wilt and leaf lesions on *Crotalaria brievidens* and *Crotalaria ochroleuca*. This identification is linked to other documented scientific studies that are cited in this dissemination.