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EVALUATION OF THE FUNGICIDAL POTENTIAL OF SOME SELECTED HERBAL EXTRACTS ON *COLLETOTRICHUM MUSAE* UNDER *IN VITRO* CONDITIONS

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Anthracnose disease in banana caused by the fungus, *Colletotrichum musae*, is a major threat to commercial production especially at the postharvest stage. Being a quiescent pathogen, *C. musae* is almost not targeted or detected at the field level; hence the losses may even reach 50-60% due to rapid anthracnose disease development at the postharvest stage. This has become a big challenge to utilize commonly used management strategies in controlling anthracnose disease in banana in the field. Other than postharvest dipping of banana fruits in diluted fungicide solutions, various physical methods, such as hot water treatment and waxing are being attempted without much success. Therefore, efficient and environmental friendly methods are required to be explored in controlling the disease. The current study was conducted to evaluate the efficacy of six locally available plant species against banana anthracnose pathogen *C. musae* under *in vitro* conditions. Aqueous leaf extracts of *Solanum nigrum* ('Kalukamberiya'), *Eupatorium odoratum* ('Wal Dunkola'), *Galutheria rudis* ('Wal Kapuru'), *Plectranthus zeylanicus* ('Iriweriya'), *Moringa oleifera* ('Murunga') and *Tinospora cordifolia* ('Rasakida') were screened against the fungus using agar incorporation method (on potato dextrose agar, PDA) to detect the antifungal potential of these aqueous extracts upon radial growth of the fungus. The effect of these extracts on sporulation of the fungus was also observed. Out of the six plant species tested, five were found to have very strong antifungal activity with significant inhibition of radial growth of the fungus compared to the untreated control by three days after culturing. Only *Tinospora cordifolia* extracts did not show any significant inhibition at $P < 0.05$. Maximum growth inhibition was observed in *Solanum nigrum* with 98 percent inhibition of radial growth (PIRG), which was followed by *Moringa oleifera* with 86 PIRG. Percent inhibition shown by *Galutheria rudis*, *Eupatorium odoratum* and *Plectranthus zeylanicus* were 77, 60 and 39, respectively. After 14 days of incubation period, a prominent sporulation was observed in control plates, whereas all the plates with plant extracts showed very low spore formation. This study concludes that leaf extracts of *Solanum nigrum*, *Moringa oleifera*, *Eupatorium odoratum*, *Galutheria rudis* and *Plectranthus zeylanicus* have strong antifungal properties that can inhibit growth and sporulation of banana anthracnose pathogen *Colletotrichum musae* under *in vitro* conditions.