

**IN VITRO SCREENING OF SELECTED FUNGICIDES AGAINST
BLACK LEAF SPOT PATHOGEN OF OKRA**

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Abstract

Okra is one of the major vegetables which gets a significant place in Sri Lankan cuisine. Okra is susceptible to various diseases. In that way, Okra black leaf spot disease is one of the major diseases of okra which is caused by the fungal species *Cercospora abelmosachi*. The severe infection of black leaf spot disease in okra harms the plant and reduces okra yield. To get rid of this issue farmers apply various fungicides that are available in the commercial market. Sri Lankan farmers follow a malpractice called cocktail application of fungicides where they apply a mixture of commercially available fungicides for disease control without knowing the harmful impacts on the environment and human health. This experiment was carried out to find the most effective fungicides against black leaf spot pathogen *in vitro*. The experiment was initiated with the isolation of okra black leaf spot pathogen from the infected leaves and was cultured on potato dextrose agar (PDA) media. Afterwards, the PDA culture media received various fungicide treatments. In this experiment, the treatments were mancozeb 80% WP (0.4 g/200ml), thiram 80% WP (0.25 g/200ml), homai (thiophanate-methyl 50% + thiram 30%) (0.2 g/200ml), and sulfur 80% (1 g/200ml), with PDA without fungicide serving as the control. Five treatments and four replicates were used in a completely randomized design for the experiment. The findings indicated that under *in vitro* conditions, both mancozeb and homai fungicides entirely halted the colony growth of the pathogen. Consequently, it was deduced from this study that the fungicides, mancozeb and homai, could exhibit efficacy in managing the okra black leaf spot fungus at the recommended rate of application.

Keywords: *Cercospora*, Fungicides, Homai, Leaf spot, Mancozeb, Okra

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