IDENTIFY THE EFFICACY OF SELECTED BOTANICALS FOR CONTROLLING MAJOR FUNGAL DISEASES IN GUAVA

(Psidium guvajava)

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ABSTRACT

Guava is susceptible to diseases: anthracnose, which is caused by *Colletotrichum spp*, and scab disease, which is caused by *Pestalotipsis spp*.

Anthracnose and scab disease are two major diseases among the post-harvest diseases of guava.

Synthetic fungicides are the main method used to address these diseases. Regarding guavas, the primary issue is the residual toxicity of synthetic fungicides that persist post-harvest, subsequently impacting human health. Plant extracts are used to control a variety of plant diseases as a safer alternative to conventional fungicides. The present investigation was conducted to screen the efficacy of several plant extracts against *Colletotrichum spp* and *Pestalotipsis spp* under *in vitro* conditions. Plant extracts of *Azadirachta indica* (Neem), *Ocimum tenuiflorum* (Maduruthala), *Solanum torvum* (Thibbatu), *Helianthus annuus* (Wild Sunflower), *Lantana camara* (Gandhapana), *Phyllanthus emblica* (Nelli), *Cinnamomum verum* (Cinnamon), *Allium sativum* (Garlic) and *Syzygium aromaticum* (Clove) were prepared by using methanol extraction. plant extract was screened *in vitro* by the "poisoned food technique". The experiment showed that Tospin fungicide showed the highest growth inhibition, with 100% results. when considering the botanicals, the highest growth inhibition was observed in methanolic extracts of *C. verum* extract, followed by *A. indica*, *A. sativum*, and *S. aromaticum* extracts,has a high antifungal potential and can suppress the growth of the guava anthracnose disease pathogen *Colletotrichum spp* When considering the botanicals, the highest growth inhibition was observed in methanolic extracts of *A. sativum* and *S. aromaticum* extracts, followed *by A. indica* and *C. verum* extracts, have high antifungal potential, which can inhibit the growth of the guava scab disease pathogen *Pestalotipsis spp.* Further research is needed to evaluate the effectiveness of plant extracts against the causal organisms of anthracnose and scab diseases of guava under *in vivo* conditions prior to making any recommendation.

Keywords: *Colletotrichum spp*, *Pestalotipsis spp*, Fungicides, Plant Extracts, Poisoned Food Technique, Anthracnose, Scab disease

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