

ID 48

Effect of different botanicals on the control of *Cercospora* leaf spot (*Cercospora* spp) and white rust (*Albugo* spp) diseases in leafy vegetable cultivation in the low country wet zone

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Abstract

Leafy vegetables refer to the edible leaves of plants, which may be accompanied by tender petioles and shoots. These vegetables are widely available across the world owing to their unique characteristics. Among all leafy vegetables, the sessile weed (*Alternanthera Sessilis*), locally known as *Mukunuwanna* is the most commonly consumed in Sri Lanka. Heavy use of agrochemicals is a major problem with leafy vegetables because it poses serious health risk. Thus, it ought to be a top priority to find out how to manage pests and diseases in leafy vegetables cultivation without using chemicals. This experiment was conducted at the Agriculture Research Center, Thelijjawila during 2021 January to October to evaluate the curative effect of sprays of mancozeb (2 g/L), spent mushroom substrate (1:3 w/v), cinnamon leaf extract (1:4 w/v) against *Cercospora* leaf spot and white rust diseases in sessile weed. The experimental design was Randomized complete block design(RCBD) with 3 replicates. *Mukunuwanne* variety "Pliyandala selection" was used in the experiment. Disease severity percentage and yield (Mt/ha) were recorded. Disease severity percentage was calculated using the ratio of number infected leaves to number of non-infected leaves of randomly taken plants using 1×1 quadrat. Data were analyzed using STAR statistical software package. Among the three treatments use of Mancozeb (2 g/L) found to be promising over other two and compared the control as well. However, Cinnamon leaf extract (1:4 w/v) and spent mushroom substrate (1:3 w/v) showed similar level of disease severity. The two diseases could be controlled at a significant level with any of the tested treatments and also gave a yield advantage.

Key word: Botanicals, Health hazard, Commercial formulations, Leafy vegetable

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