Potential use of *Baccharis dracunculifolia* essential oil to control white mold in bean

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Common bean (*Phaseolus vulgaris* L.) is a susceptible plant to diseases caused by pathogens. *Sclerotinia sclerotiorum* (Lib.) de Bary is a causative agent of one of the most destructive diseases of bean called white mold. White mold control is accomplished mainly through the use of synthetic fungicides, which can lead to higher costs of production and environmental problems. The research of alternative methods to control pests and diseases through essential oils and plant extracts has increased considerably (1, 2). This study aimed to evaluate the antifungal activity of *Baccharis dracunculifolia* essential oil on *S. sclerotiorum* (Ss) of bean leaves. Sclerotia were disinfected with ethanol-70% followed by 1% sodium hypochlorite for 3 min. After that, they were washed in sterile water and transferred to Petri dishes (9 cm diameter) containing 15 mL of PDA (Potato Dextrose Agar) with chloramphenicol (100 mg/L), which were maintained at 23 °C in the dark. Bean plants were grown in 5 L pots with a commercial substrate. Thirty days after plant emergence, leaflets of the youngest trifoliate leaf of each plant were detached, brought to the laboratory and put into plastic boxes lined with moist paper towel. The *B. dracunculifolia* essential oil was sprayed on the leaflets using a Potter tower in the concentrations of 0%, 0.5%, 1%, 2% and 4%. Ss mycelial discs (5 mm diameter) were transferred from the Petri dishes to the leaflets surface. Boxes were maintened at 23 °C in the dark. The colony diameter was measured after 24 and 48 h using a digital caliper. The experimental design was completely randomized with four replicates per treatment. At the concentration of 4% of essential oil of *B. dracunculifolia* there was complete inhibition of the fungal growth. This result indicates that the essential oil of *B. dracunculifolia* field could be used for the management of Ss on common beans.

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