

SUPPRESSING FUNGAL SOFT FRUIT PATHOGENS GROWTH USING PLANT EXTRACT

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Chemical management of pests includes herbicides, insecticides and fungicides. Side effect of fungicides are the accumulation of active substances and/or related metabolites in harvest and environment [1], however the usage of these pesticides still grows due to increased activity of pathogens [2]. Fungal pathogens cause most of diseases in horticulture and are becoming more aggressive and resistant to fungicides because of environmental changes [3]. Necrotrophic fungal pathogen *Botrytis cinerea* causes grey mold disease for more than couple hundred plants species [4], including strawberry and raspberry. In order to decrease the usage of fungicides, biological control methods like application of substances excluded from plants for food security are under investigation [3].

The laurel is well known for its aromatic leaves and there is a possibility that extract from laurel has an antifungal effect to *B. cinerea* because of the aromatic active substances. The aim of the research was to investigate the ability of laurel extract to suppress the growth of *B. cinerea* isolates from strawberry and raspberry *in vitro*. The research was carried out at LAMMC Institute of Horticulture, Lithuania. The research started from mixing different concentrations of the investigated extract with PDA and inoculating each plate with 7 mm diameter *B. cinerea* pathogen disc. The concentrations used for the test were 2600 µL/L, 2800 µL/L, 3000 µL/L. Petri plates were incubated at 20±2 °C in the dark and measured after 2, 4 and 7 days (Fig. 1). The results showed that all used laurel concentrations have an ability to suppress the growth of *B. cinerea*. The highest concentration extract (3000 µL/L) showed more effectiveness with both *B. cinerea* isolates, especially with isolates from strawberry (Fig. 2). In conclusion, laurel extract can be used as an inhibitor for the growth of *B. cinerea*.

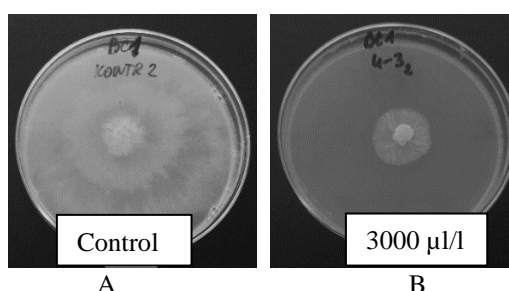


Fig. 1. *B. cinerea* isolate from strawberry after 4 days of inoculation without extract (A) and with laurel extract (B)

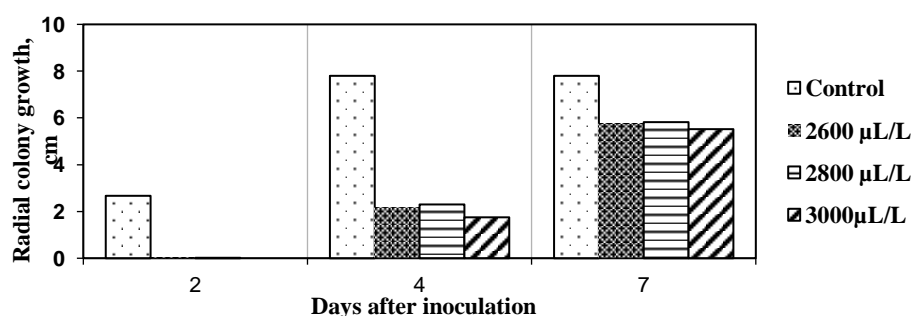


Fig. 2. Radial colony growth of *B. cinerea* isolates from strawberry affected with laurel extract

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