عنوان مقاله:

In vitro inhibitory effects of four medicinal plant essential oils against Sclerotinia sclerotiorum

محل انتشار:

پنجمین همایش بین المللی مهندسی کشاورزی و محیط زیست با رویکرد توسعه پایدار (سال: 1398)

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خلاصه مقاله:

Resistance to conventional fungicides causes the poor disease control of agriculture. Natural products from plants have great potential as novel fungicide sources for fungi control. Inthis study, in addation to the chemical analysis of Iranian Zataria multiflora, Thymus carmanicus, Mentha piperita and Satureja hortensis essential oils, their fungicidal and/ or fungistatic effects on Sclerotinia sclertiorum, Canola white rot agent. Essential oils were extracted by means of hydro- distillation and afterwards GC-MS analysis was performed to identify their compounds. The rates of growth inhibition were measures after placing active myclia plugs of S. sclerotiorum on petri- dishes containing PDA amended with specific concentrations of essential oils (100, 150 and 300 ˙l/L) and incubated at 28-1œC. the data were analyzed using SAS (version 8) software. The results showed that these essential oils were very effective on S. sclerotiorum with growth inhibition average of 100% at 300 ˙l/L concentration. Nevertheless, the most sensitive and the most resistant to the studied essential oils with average growth inhibition 78.34% and 68.67% respectively. Since growth inhibition of studied essential oils was evident in this study, they have potential to control of S. sclerotiorum and could be considered of developing new fungicides.

کلمات کلیدی:

Sclerotinia sclerotiorum , essential oil, Antifungal activity, Canola.

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