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Effect of *Symphytum Officinale*, *Cymbopogon Citratus* and *Allium sativum* extracts on *Botrytis Cinerea* causal agent of grey mold of tomato

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Botrytis cinerea Pers. is a necrotrophic plant pathogenic fungus, the causal agent of gray mold. The fungus has a wide host range and can infect over 230 plant species. In Algeria, it is almost present on all greenhouse crops, especially tomatoes; which the pathogen can cause major economic damages. This disease is controlled mainly by the application of fungicides. However, this can lead to the development of pathogen resistance. For this reason, some alternative methods of control have been adopted and our research is focused on them by using plant extracts against *B. cinerea*. In this study, we evaluated the effect of comfrey manure (*Symphytum officinale*), decoction of citronella (*Cymbopogon citratus*) and garlic decoction (*Allium sativum*) on one strain of *Botrytis cinerea* isolated from tomato and selected among 40 isolates for its high aggressivity and resistance to fenhexamid. Tests were conducted in vitro, on PDA medium for mycelial growth and on detached leaves by measuring the diameter of lesion. Different concentrations of plant extracts (5-10 and 20%) were tested on PDA medium. The results revealed that the highest antimicrobial activity (50% inhibition of mycelial growth) was obtained using *Symphytum officinale* at 10%. On detached leaves, the concentration of 5% was tested for all extracts, before and after inoculations. Results showed that *Symphytum officinale* reduce the severity of the disease by 52% in preventive and 44% in curative treatment. Whereas, *Allium sativum* revealed the highest efficacy on reducing the severity of the disease by 76% in preventive and 64% in curative treatment.

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