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APPLICATION OF CHITOSAN TO CONTROL GRAY MOLD (BOTRYTIS CINEREA) AND BLACK MOLD (ALTERNARIA ALTERNATE) OF STRAWBERRY IN VITRO

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The application of natural compounds to control plant pathogens has recently been under considerable attention as alternatives to the use of synthetic fungicides. Chitosan and its derivatives, due to antimicrobial properties and their biodegradable and ecofriendly nature are compatible with the environment and human health. The aim of the present research was to evaluate the efficacy of two types of chitosan (70 and 90% *degree*of deacetylation) with four concentrations (0, 01, 0.5 and 1%) to control growth of gray mold (*Botrytis cinerea*) and black mold (*Alternaria alternate*) of strawberry in vitro. The analysis of variance showed that degree *of* deacetylation and concentration of chitosan had a significant effect on the growth of both fungi. Chitosan with 70% *degree*of deacetylation had higher inhibition percentage compared with chitosan 90% and was more effective on *Botrytis cinerea* than *Alternaria alternate.* Inhibition percentage increased with the increment of concentration from 0.1 to 1, however the differences were non-significant.

Keywords: Chitosan, Botrytis cinerea, Alternaria alternate, inhibition percentage.