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PRE HARVEST APPLICATIONS FOR CONTROL GRAY MOULD ROT ON STRAWBERRY FRUITS DURING STORAGE

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ABSTRACT

Gray mold caused by *Botrytis cinerea* Pers causes significant losses of strawberry fruits during storage. The effect of certain safe pre harvest treatments *i.e.* Oil Tea, Plant Guard, Salicylic Acid or Yeast each alone or in combinations was studied under artificial inoculation or natural infection during storage at 0 °C, 5 °C or 10 °C and 90-95% RH% for 4 weeks in the seasons 2013 or 2014. The relation of each treatment with peroxidase activity was rather studied. Generally, all pre-harvest treatments protected fruits during the two seasons, Oil Tea and Yeast combination was the most effective treatment. However, the combination of Oil Tea and Plant Guard and Yeast and Salicylic Acid recorded the highest percentage of infection with the lowest efficacy that were 9.44 and 10.0% ; 76.4 and 76.0% during 2013 or 2014, respectively. Switch Fungicide recorded the highest efficacy, (100%) after 4 weeks upon natural infection or artificial inoculation as compared with different treatments. Oil Tea alone or in combination with Salicylic Acid or Plant Guard decreased the disease severity of gray mold to considerable level. In general, storage at 0 °C significantly decreased the disease severity compared to storage at 5 °C or 10 °C . Pre harvest treatments increased peroxidase activity in strawberry fruits upon natural infection conditions compared to the control. However, peroxidase activity with no significant differences among the treatments.

Key words: *Botrytis cinerea*, Oil Tea, peroxidase enzyme. Plant Guard, storage temperatures, strawberry fruits, Salicylic Acid and Yeast treatments.