Weeraporn Dejnumbunchachai 2013: Induced Resistance of Mango after Harvest with Generally Recognized as Safe (GRAS) Chemicals Against Anthracnose Disease. Master of Science (Plant Pathology), Major Field: Plant Pathology, Department of Plant Pathology. Thesis Advisor: Associate Professor Somsiri Sangchote, Ph.D. 93 pages.

The effectiveness of generally recognized as safe (GRAS) including propyl paraben, salicylic acid and oxalic acid at five concentrations of 100 250 500 750 and 1,000 mg/l was tested to control mango anthracnose. *In vitro* experiment, propy paraben at concentrations of 250, 500,750 and 1,000 mg/L inhibited mycelial growth and spore germination at 100% similar to imazalil (positive control) whereas salicylic acid and oxalic acid showed low inhibition. *In vivo*, experiments were divided into pre and post inoculation with *C. gloeosporioides* 10^6 conidia/ml at 25ºC for 24 hr in the moist condition after treatment. The pre-inoculation experiment, 100 mg/L oxalic acid showed the most efficiency to control disease which was no significant difference with at 250 mg/L imazalil and disease severity was 6.1 and 6.0 % respectively. For the post-inoculation experiment, propyl paraben at 250 mg/L showed the lowest disease severity at 4.9% and oxalic acid at 100 and 250 mg/L was 14.6 and 11.8 %. Mango fruit were dipped in 100 mg/l oxalic acid at 6, 12, and 18 and 24 hr, before inoculation with *C .gloeosporioides*, ß-1, 3 -glucanase assay was conducted. The result revealed that mango fruit dipped in 100 mg/L oxalic acid at 24 hr before inoculation treatment had the lowest disease severity at 4.1% and induced the highest ß-1,3 –glucanase activity at 23.92 units/mg protein. Furthermore, oxalic acid delayed color changes and firmness losses, but had no effect on titratable acidity, total soluble solids content and ascorbic acid.

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