



ISOLATION AND SELECTION OF YEASTS FOR BIOLOGICAL CONTROL OF POSTHARVEST DECAY OF MANGO

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Consumers concerns about food safety led to great restrictions for postharvest application of fungicides, especially for fruits and vegetables. So, it is very important to develop alternative strategies for the control of postharvest diseases. In this study, 163 yeast were isolated from fruits cultivated at São Francisco River Valley (Brazil) using different approaches and evaluated about their potential of control of mango decay. The largest number of isolates was obtained from table and wine grapes, followed by mango and melon. The isolates were examined as antagonists against major ethiological agents of mango decay in the region (*Colletotrichum gloeosporioides*, *Fusicoccum aesculi* and *Lasiodiplodia theobromae*). Six to twelve percent of them were able to inhibit disease symptoms progress when co-inoculated with the pathogens in mango fruits along 10 days incubation. The data collected were analyzed by the Kaplan-Meyer success/failure method and it was found that the isolates LF, L7K and L10 showed incidence curve of antracnosis, stem-end rot and *Fusicoccum* rot significantly lower than control treatment (GBW test; $p > 0,05$). In the second experiment, the mango fruits were submitted to the common handling of postharvest operations (washing/drying, wax and cold storage in paper box) and inoculated with the yeasts and pathogens isolates. All yeasts significantly reduced the incidence of antracnosis, while only the isolate L10 significantly reduced stem-end rot and *Fusicoccum* rot incidence by Dunnet test ($p > 0.05$). Additionally, the inoculation of all the yeast isolates reduced severity of antracnosis and stem end rot to up to 90% than the control treatment. For *F. aesculli*, the innoculation of the isolates L7K and L10 showed a reduction of severity higher than 80% in relation to the control.