

Title Studies on the effectiveness preharvest applications of antagonistic yeasts on postharvest decays of satsuma mandarins

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Abstract

Postharvest *Penicillium digitatum* and *P.italicum* caused the rot of green and blue are the most important problems in satsuma mandarin. The aim of this study was to prevent *Penicillium* decays by preharvest yeast applications. For this work, benomyl from benzimidazole group of fungicides which was one the registered fungicides on citrus on preharvest was used. In addition, bioformulations of antagonistic yeasts isolates (M1/1, *Metschnikowia pulcherrima* and L22/1, *Pichia guilliermondii*) that was found to be effective against *Penicillium* rots in previous projects were also included. The treatments were carried out in the orchard of E.U. Faculty of Agriculture Department of Horticulture in Bomova and a farmer's orchard in Seferihisar, İzmir. The harvested fruit were stored in a cold room (5°C) for three months. Decayed fruit counts, and the population dynamics of yeast and microbial load were monitored during storage. Quality analysis was also conducted on fruit samples. As a result of the study, it did not get the same results in the two gardens on the effectiveness of pre harvest applications of bioformulations of yeasts and benomyl. The yeast isolates M 1/1 was more effective in both experiment gardens in the Bomova (64,05%) and Seferihisar (51,69%). It did not get the expected results on the population dynamics of yeast isolates.