

Title Effect of chemical treatments and storage condition to control *Alternaria* black rot in sweet orange

Author Aboutalei A and Hasanzada H

Citation Program and Abstracts, 11th International Citrus Congress (ISC Congress), 26-20 October 2008, Wuhan, China. 333 pages.

Keywords orange; *Alternaria citri*; chemical control

Abstract

Alternaria black rot, caused by *Alternaria citri* is an important problem in commercial storage of citrus. It can also be a problem for the processing industry by contaminating the juice. Sweet orange is one of the sensitive citrus to *Alternaria* decay. In order to study the effect of chemical treatments and storage condition on postharvest life of sweet orange, this experiment was conducted in factorial arrangement based on CRD with four replications. Fruits were harvested in mid January. After washing and inoculation with *Alternaria citri* spores, grouped in two bulk and treated with Sodium Carbonate, Sodium Bicarbonate, Thiabendazole, Benomile, 2,4-D at different concentrations for 5 minutes. Control treatment fruits in two levels included none washed and washed with tap water. After treatments, fruits were kept in polyethylene bags individually. One group of fruits were stored in ambient storage and others stored in cold storage at 6°C for 4 months. Results showed that percentage of decayed fruits was different among treatments and storage conditions. In cold storage decayed fruits were lesser and fruits had better appearance. Among treatments, Sodium carbonate 1000 mg/l had significantly the highest effect on decreasing fruits decay. Large amount of decayed fruits were observed in Benomile 500 mg/l treatment. General concluded that Sodium carbonate 1000 mg/l, Thiabendazole 1500 mg/l and 2,4-D 150 and 200 mg/l and stored at 6°C were the best treatments to control *Alternaria* black rot.