

Pojava fitopatogenih gljiva na toplinski tretiranim plodovima nektarine sorte "Diamond Ray" tijekom skladištenja

Goran FRUK, Lidija NIŠEVIĆ, Zdravka SEVER, Tihomir MILIČEVIĆ, Tomislav JEMRIĆ

Sveučilište u Zagrebu, Agronomski fakultet, Svetošimunska cesta 25, 10000 Zagreb, Hrvatska, (e-mail: gfruk@agr.hr)

Sažetak

Nektarina je važno sezonsko voće koje je traženo na tržištu dulji period od vremena u kojem uzgaja. Iako se svrstava u klimakterijsku skupinu voća, bere se bliže užitnoj zrelosti od drugog klimakterijskog voća jer izrazito kasnog nakupljanja arome. Zbog visokog stupnja zrelosti u vrijeme berbe te velikog sadržaja vode i šećera iznimno je pogodna za razvoj fitopatogenih organizama čime je njeno čuvanje vrlo ograničeno. Nektarina se u NA može čuvati do 4 tjedna, ali su u tom periodu mogući veliki gubici uzrokovani napadom patogena. Najvažniji patogeni tijekom čuvanja nektarine u Hrvatskoj su *Penicillium expansum*, *Botrytis cinerea* i *Monilinia sp.* Primjena fungicida na plodovima voća nakon berbe je zabranjena te je potrebno naći alternativne metode koje su ekološki i zdravstveno prihvatljive. Istraživana je pojava patogena na toplinski tretiranim plodovima nektarine (*Prunus persica* var. *nectarina* cv. 'Diamond Ray') čuvane četiri tjedna na 0°C u NA. Istraživani tretmani su bili topli zrak (zagrijavanje plodova toplim zrakom do 45° C kraj koštice - HAT) te potapanje u toplu vodu na temperaturi od 48° C u trajanju od 6 minuta (HWD 48) i 52° C u trajanju od 2 minute (HWD 52). Nakon 5 dana držanja na sobnoj temperaturi, određen je udio plodova sa simptomima gljivičnih bolesti, te su ispitani pokazatelji kakvoće (tvrdoća, topljiva suha tvar, ukupne kiseline, pH, EC). Između ispitivanih tretmana gotovo da i nije bilo razlike u kakvoći plodova. Najzastupljeniji patogeni bili su *Penicillium expansum* i *Botrytis cinerea*. U tretmanu HAT bilo je najmanje trulih plodova nakon četiri tjedna čuvanja. Potrebno je optimizirati učinkovitost toplinskih tretmana i istražiti djelovanje na kakvoću plodova.

Ključne riječi: čuvanje, *Penicillium expansum*, *Botrytis cinerea*, *Monilinia sp.*, kakvoća, trulež

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Occurrence of phytopathogenic fungus on heat-treated nectarine "Diamond Ray" during storage

Goran FRUK, Lidija NIŠEVIĆ, Zdravka SEVER, Tihomir MILIČEVIĆ, Tomislav JEMRIĆ

University of Zagreb, Faculty of Agriculture, Svetosimunska cesta 25, 10000 Zagreb, Croatia, (e-mail: gfruk@agr.hr)

Abstract

Nectarine is important seasonal fruit that has been requested in the market for a longer period of time than it matures. Although it is climacteric, fruit is harvested closer to "ready-to-eat" maturity than the other climacteric fruit because of very late accumulation of aroma in fruit. High degree of maturity at the harvest and the high content of water and sugar it is very susceptible for plant pathogen organisms, which limits its storeability. Nectarines in the NA can be stored for up to 4 weeks, but during this period a large losses are possible due to the pathogen attack. The most important pathogens during nectarine storage in Croatia are *Penicillium expansum*, *Botrytis cinerea* and *Monilinia sp.* Postharvest application of fungicides is not allowed, so it is necessary to find alternative methods that are environmentally friendly. The occurrence of pathogens on heat treated fruits of nectarine (*Prunus persica* var. *nectarina* cv. 'Diamond Ray') stored for four weeks at 0 °C in NA was studied. The investigated treatments were hot air (hot air treatment till fruit reach 45 °C near stone - HAT) and immersion in hot water at a temperature of 48 °C for 6 minutes (HWD 48) and 52 °C for 2 minutes (HWD 52). The determination of pathogens and percentage of fruit with symptoms of fungal diseases, was conducted after 5 days of self-life. Fruit quality parameters (firmness, soluble solids, total acidity, pH, EC) were also investigated. There is almost no difference among the tested treatments is almost no difference in the fruit quality. The most common pathogens were *Penicillium expansum* and *Botrytis cinerea*. The treatment of HAT had the least rotten fruit after four weeks of storage. It is necessary to optimize the effectiveness of heat treatment and to explore the effects on fruit quality.

Key words: storage *Penicillium expansum*, *Botrytis cinerea*, *Monilinia sp.*, quality, decay

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