

Abstract:

After prolonged storage nectarines and peaches do not ripen and become soft and juicy, but instead develop a dry, woolly texture. These fruit produce less ethylene than normally ripening fruit. The disorder can be alleviated by storing the fruit in the presence of exogenous ethylene, and can be exacerbated by treatment with the ethylene action inhibitor 1-methylcyclopropene (MCP). Ethylene evolution was not affected by MCP in non-stored fruits, but was inhibited in fruits following storage. Ethylene during storage enhanced ethylene production of fruits after storage. MCP inhibited the expression of 1-aminocyclopropane-1-carboxylic acid oxidase (ACO) after storage. After storage the message of polygalacturonase (PG) and pectin esterase (PE) was positively regulated by ethylene while endo-glucanase (EGase) was negatively regulated. The data suggest that a certain level of ethylene production is essential for normal ripening of nectarines after cold storage.